DVP-NS705V/NS755V/ NS905V/NS915V
RMT-D146P/D147A/D147E/D1470/D147P

SERVICE MANUAL

Self Diagnosis Supported model

Photo: DVP-NS905V (Silver type)

SPECIFICATIONS

System
Laser: Semiconductor laser
Signal format system:
DVP-NS705V/NS905V: PAL (NTSC)
DVP-NS755V: NTSC
DVP-NS915V: NTSC/PAL (To change the color system)

Audio characteristics
Frequency response: DVD VIDEO (PCM 96 kHz): 2 Hz to 44 kHz (44 kHz: –2 dB ±1 dB)/Super Audio CD: 2 Hz to 100 kHz (50 kHz: –3 dB ±1 dB)/CD: 2 Hz to 20 kHz (±0.5 dB)
Signal-to-noise ratio (S/N ratio): 115 dB (LINE OUT L/R (AUDIO) 1/2 jacks only) (EXCEPT AEP, UK, Russian) (LINE OUT L/R (AUDIO) jacks only) (AEP, UK, Russian)
Harmonic distortion: 0.003 %
Dynamic range: DVD VIDEO/Super Audio CD: 103 dB/CD: 99 dB
Wow and flutter: Less than detected value (±0.001% W PEAK)

Outputs
AEP, UK, Russian:
(**Jack name:** Jack type/Output level/Load impedance)
LINE OUT (AUDIO): Phono jack/2 Vrms/ 10 kilohms
DIGITAL OUT (OPTICAL): Optical output jack/–18 dBm (wave length: 660 nm)
DIGITAL OUT (COAXIAL): Phono jack/ 0.5 Vp-p/75 ohms
5.1CH OUTPUT: Phono jack/2 Vrms/ 10 kilohms
LINE OUT (VIDEO): Phono jack/1.0 Vp-p/ 75 ohms
S VIDEO OUT: 4-pin mini DIN/Y: 1.0 Vp-p, C: 0.3 Vp-p (PAL), 0.286 Vp-p (NTSC)/75 ohms

EXCEPT AEP, UK, Russian:
(**Jack name:** Jack type/Output level/Load impedance)
LINE OUT (AUDIO) 1/2: Phono jack/ 2 Vrms/10 kilohms
DIGITAL OUT (OPTICAL): Optical output jack/–18 dBm (wave length: 660 nm)
DIGITAL OUT (COAXIAL): Phono jack/ 0.5 Vp-p/75 ohms
5.1CH OUTPUT: Phono jack/2 Vrms/ 10 kilohms
COMPONENT VIDEO OUT(Y, P_B/C_B, P_R/ C_R): Phono jack/Y: 1.0 Vp-p/P_B/C_B, P_R/ C_R: 0.7 Vp-p/75 ohms
LINE OUT (VIDEO) 1/2: Phono jack/ 1.0 Vp-p/75 ohms
S VIDEO OUT 1/2: 4-pin mini DIN/Y: 1.0 Vp-p, C: 0.3 Vp-p (PAL), 0.286 Vp-p (NTSC)/75 ohms

General
Power requirements:
110 V AC, 60 Hz
120 V AC, 60 Hz
220 V AC, 60 Hz
220–240 V AC, 50/60 Hz
110–240 V AC, 50/60 Hz
See page 1-1 for further information
Power consumption:
15 W
16 W
17 W
18 W
See page 1-1 for further information

Dimensions (approx.):
DVP-NS705V/NS755V:
430 × 74 × 257 mm (17 × 3 × 10 $^1/_8$ in.)
DVP-NS905V/NS915V:
430 × 77 × 257 mm (17 × 3 $^1/_8$ × 10 $^1/_8$ in.) (width/height/depth) incl. projecting parts
Mass (approx.):
DVP-NS705V/NS755V:
2.6 kg (5 $^{47}/_{64}$ lb)
DVP-NS905V/NS915V:
2.8 kg (6 $^3/_{16}$ lb)
Operating temperature: 5 °C to 35 °C (41 °F to 95 °F)
Operating humidity: 25 % to 80 %

Supplied accessories
Check that you have the following items:
• Audio/video cord (pinplug × 3 ←→ pinplug × 3) (1)
• Remote commander (remote) (1)
• Size AA (R6) batteries (2)

Specifications and design are subject to change without notice.

ENERGY STAR® is a U.S. registered mark. As an ENERGY STAR® Partner, Sony Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

DVD VIDEO™   SUPER AUDIO CD   COMPACT disc DIGITAL VIDEO   **CD/DVD PLAYER**

SONY®

SAFETY CHECK-OUT

After correcting the original service problem, perform the following
safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.

2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.

3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.

4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.

5. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.

6. Check the B+ voltage to see it is at the values specified.

7. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

Fig. A. Using an AC voltmeter to check AC leakage.
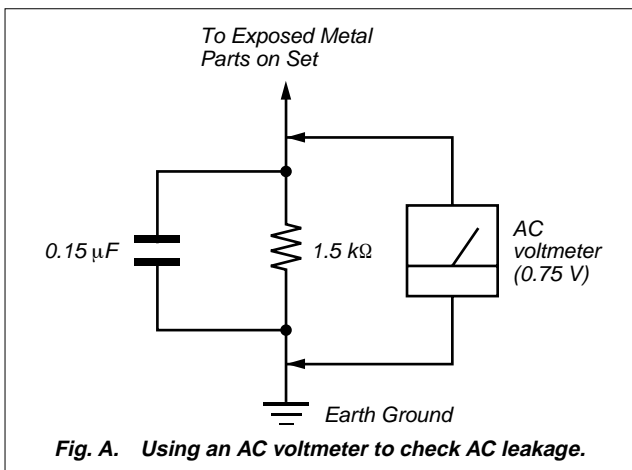
WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 25 cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

CAUTION:

The use of optical instrument with this product will increase eye hazard.

> CAUTION
> Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

Unleaded solder

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size.)

[LF] : LEAD FREE MARK
Unleaded solder has the following characteristics.
• Unleaded solder melts at a temperature about 40°C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350°C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
• Strong viscosity
  Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
• Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

> CLASS 1 LASER PRODUCT
> LUOKAN 1 LASERLAITE
> KLASS 1 LASERAPPARAT

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.
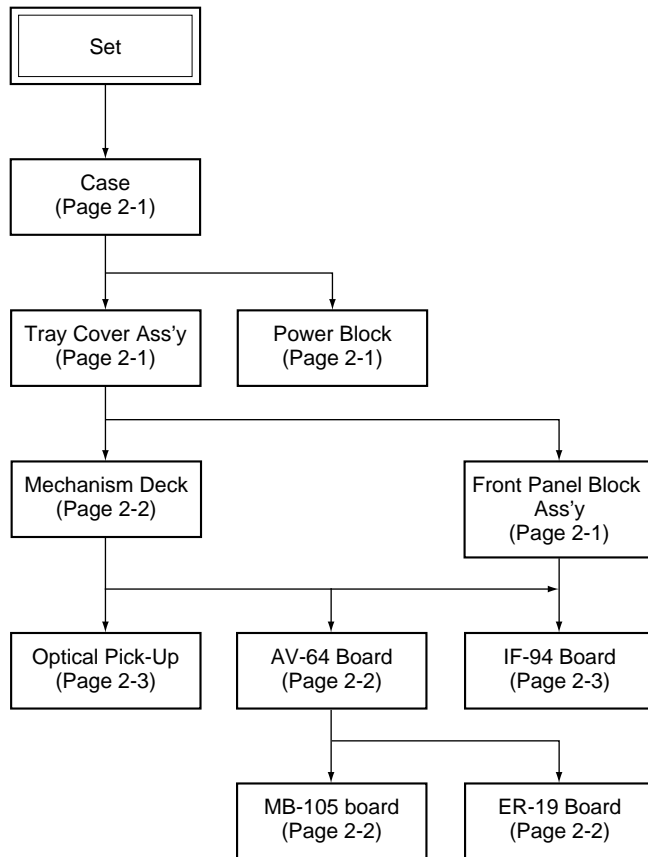
TABLE OF CONTENTS

SERVICE NOTE

1. DISASSEMBLY

• This set can be disassembled in the order shown below.

```
                    ┌─────────────┐
                    │    Set      │
                    └─────────────┘
                           │
                           ▼
                    ┌─────────────┐
                    │    Case     │
                    │ (Page 2-1)  │
                    └─────────────┘
                           │
              ┌────────────┴─────────────┐
              ▼                          ▼
      ┌─────────────────┐       ┌─────────────────┐
      │ Tray Cover Ass'y│       │  Power Block    │
      │   (Page 2-1)    │       │   (Page 2-1)    │
      └─────────────────┘       └─────────────────┘
              │                          │
              ▼                          ▼
      ┌─────────────────┐       ┌─────────────────┐
      │ Mechanism Deck  │       │ Front Panel Block│
      │   (Page 2-2)    │       │     Ass'y       │
      └─────────────────┘       │   (Page 2-1)    │
              │                 └─────────────────┘
       ┌──────┼──────────────────────────┐
       ▼      ▼                          ▼
 ┌──────────┐ ┌─────────────┐   ┌─────────────┐
 │Optical   │ │ AV-64 Board │   │ IF-94 Board │
 │Pick-Up   │ │  (Page 2-2) │   │  (Page 2-3) │
 │(Page 2-3)│ └─────────────┘   └─────────────┘
 └──────────┘       │
            ┌───────┴───────┐
            ▼               ▼
    ┌─────────────┐ ┌─────────────┐
    │ MB-105 board│ │ ER-19 Board │
    │  (Page 2-2) │ │  (Page 2-2) │
    └─────────────┘ └─────────────┘
```

2. DISC REMOVAL PROCEDURE (at POWER OFF)

1) Insert a tapering driver into the aperture of the unit bottom, and move the lever of chuck cam in the direction of the arrow Ⓐ. (See Fig. 1)
2) Draw out the tray in the direction of the arrow Ⓑ, and remove a disc. (See Fig. 1)
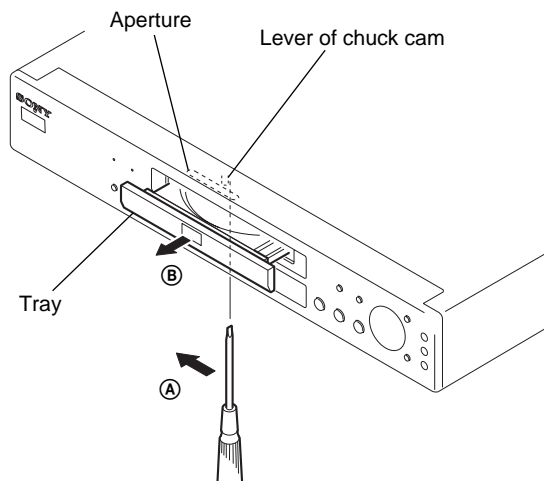
Fig. 1

3. HOW TO SERVICE MB-105 BOARD

• Use the service jig.

CK-122 board
(J-6090-129-A)

Stand
CK-121 board
(J-6090-132-A)

CK-120 board
(J-6090-127-A)

Harness 6P
(J-6090-126-A)

Five flexible flat cables

FFC 26P J-6090-117-A
FFC-9P   J-6090-118-A
FFC-5P   J-6090-119-A
FFC-15P J-6090-121-A
FFC 25P J-6090-122-A
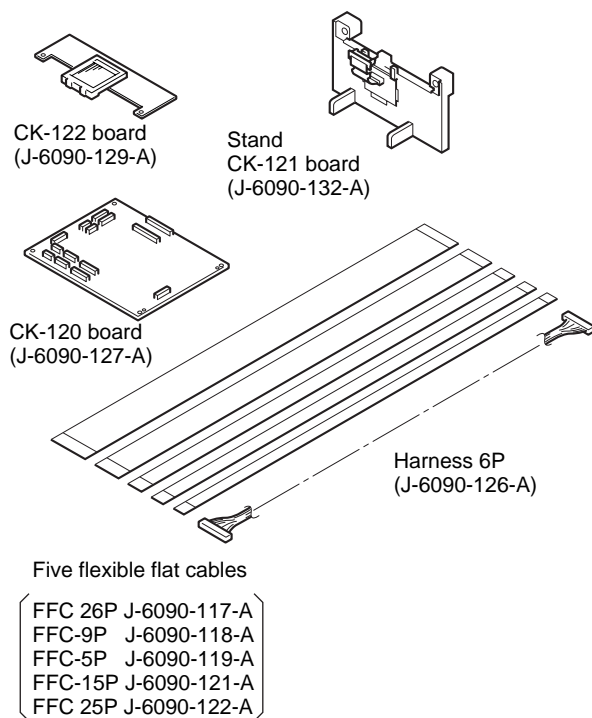
1) Remove the case from the set. (Refer to 2-1)
2) Remove the MB-105 board from the set. (Refer to 2-4)
3) Set the MB-105 board as shown in Fig. 2.

⑥ CK-122 board

① MB-105 board

④ Two screws (B3)

⑤ Connector (CN601)

③ Connector (CN101)

② Stand
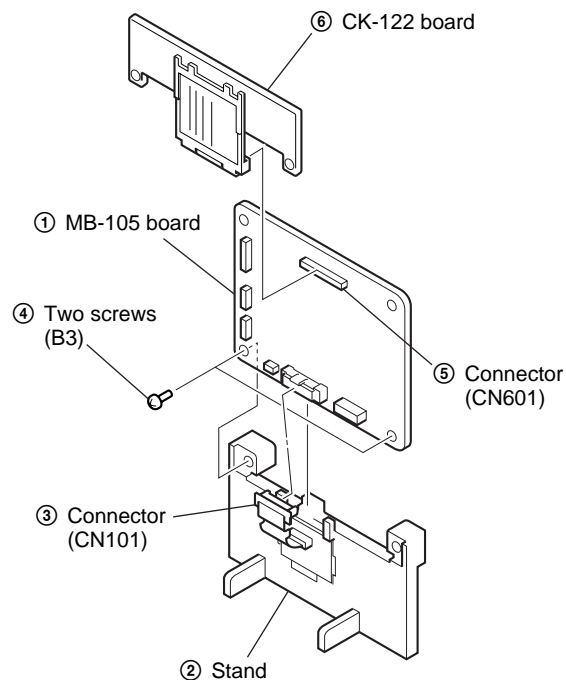
Fig. 2

4) Set the CK-120 board as shown in Fig. 3.

⑤ Connector (CN101)

⑥ Two flexible flat cables (FMO-001: CN203, FMO-002: CN204)

⑥ Flexible flat cables (FMM-035: CN201)

② Four screws (B3)

① CK-120 board

④ Connector (CN102)

③ Connector (CN601)
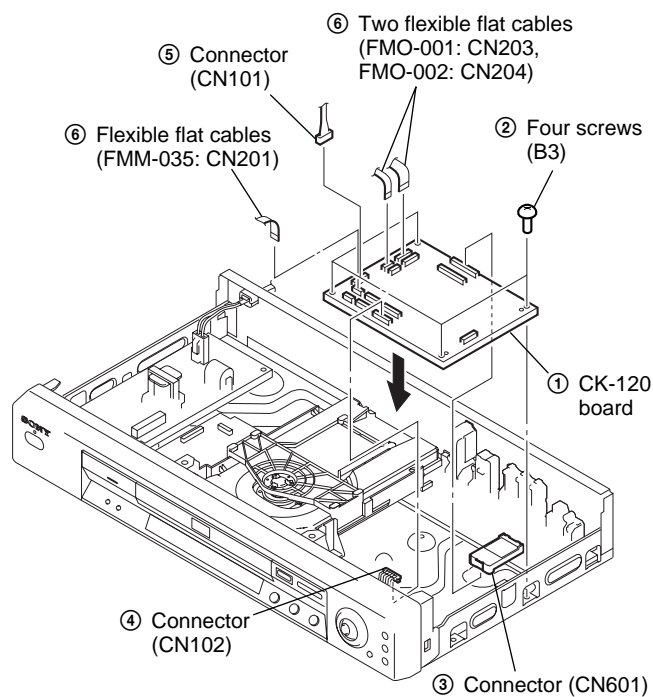
Fig. 3

5) Set the four flexible flat cables as shown in Fig. 4.

② Flexible flat cable
(FFC 9P: CN204)

③ Flexible flat cable
(FFC 5P: CN201)

① Flexible flat cable
(FFC 26P: CN203)

④ Connector
(CN112)

⑤ Connector
(CN112)

⑥ Connector
(CN112)

⑦ Connector
(CN202)

⑧ Flexible flat cable
(FFC 15P: CN112)
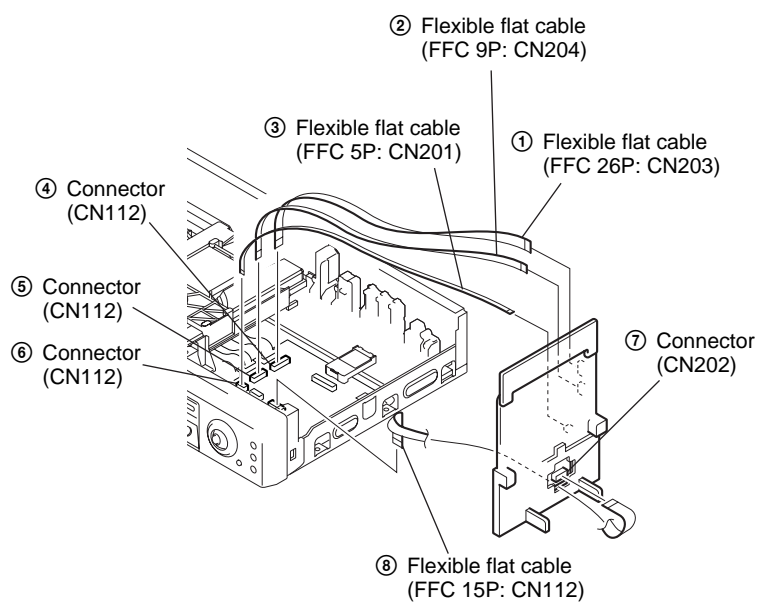
Fig. 4

Fig. 6

6) Set the flexible flat cable and harness as shown in Fig. 5.

② Flexible flat cable
(FFC 25P: CN114)

① Connector
(CN301)

④ Harness 6P
(CN110)

③ Connector
(CN102)

Fig. 5

– 6 –

SECTION 1
GENERAL

This section is extracted from instruction manual DVP-NS755V/NS915V (3-075-803-11).

Precautions

• The power requirements and power consumption of this player are indicated on the back of the player. Check that the player's operating voltage is identical with your local power supply.

Power requirements and power consumption →

On safety

• Caution – The use of optical instruments with this product will increase eye hazard.
• To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.
• Should any solid object or liquid fall into the cabinet, unplug the player and have it checked by qualified personnel before operating it any further.

On power sources

• The player is not disconnected from the AC power source as long as it is connected to the wall outlet, even if the player itself has been turned off.
• If you are not going to use the player for a long time, be sure to disconnect the player from the wall outlet. To disconnect the AC power cord, grasp the plug itself; never pull the cord.
• Should the AC power cord need to be changed, have it done at a qualified service shop only.

On placement

• Place the player in a location with adequate ventilation to prevent heat build-up in the player.
• Do not place the player on a soft surface such as a rug that might block the ventilation holes.
• Do not place the player in a location near heat sources, or in a place subject to direct sunlight, excessive dust, or mechanical shock.
• Do not install the player in an inclined position. It is designed to be operated in a horizontal position only.

• Keep the player and discs away from equipment with strong magnets, such as microwave ovens, or large loudspeakers.
• Do not place heavy objects on the player.

On operation

• If the player is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lenses inside the player. Should this occur, the player may not operate properly. In this case, remove the disc and leave the player turned on for about half an hour until the moisture evaporates.
• When you move the player, take out any discs. If you don't, the disc may be damaged.

On adjusting volume

Do not turn up the volume while listening to a section with very low level inputs or no audio signals. If you do, the speakers may be damaged when a peak level section is played.

On cleaning

Clean the cabinet, panel, and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

On cleaning discs

Do not use a commercially available cleaning disc. It may cause a malfunction.

IMPORTANT NOTICE

Caution: This player is capable of holding a still video image or on-screen display image on your television screen indefinitely. If you leave the still video image or on-screen display image displayed on your TV for an extended period of time you risk permanent damage to your television screen. Projection televisions are especially susceptible to this.
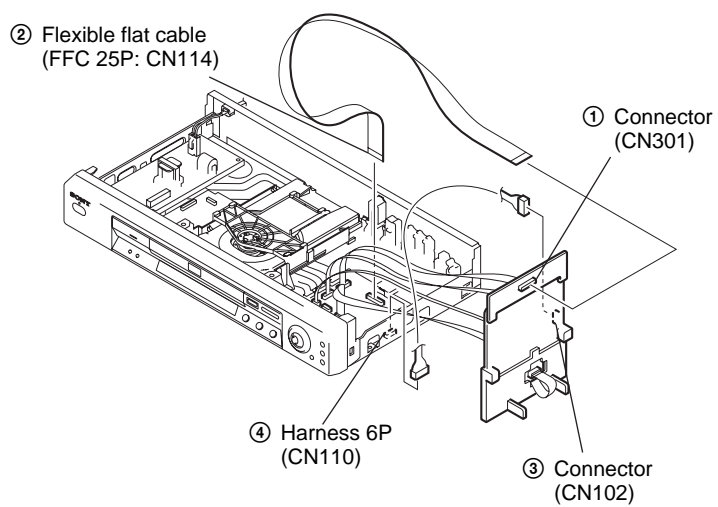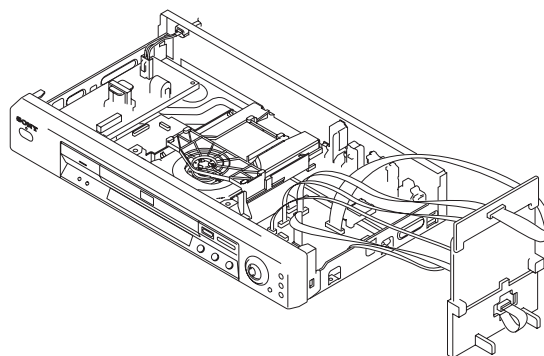

If you have any questions or problems concerning your player, please consult your nearest Sony dealer.

3

Example of discs that the player cannot play

The player cannot play the following discs:
• All CD-ROMs (including PHOTO CDs)/CD-Rs/CD-RWs other than those recorded in the following formats:
  – music CD format
  – video CD format
  – MP3 format that conforms to ISO9660* Level 1/Level 2, or its extended format, Joliet
• Data part of CD-Extras
• DVD-ROMs
• DVD Audio discs
* A logical format of files and folders on CD-ROMs defined by ISO (International Standard Organization).

Also, the player cannot play the following discs:
• A DVD VIDEO with a different region code.
• A disc that has a non-standard shape (e.g., card, heart).
• A disc with paper or stickers on it.
• A disc that has the adhesive of cellophane tape or a sticker still left on it.

For DVP-NS755V

The player cannot play discs recorded in a color system other than NTSC, such as PAL or SECAM (this player conforms to the NTSC color system).

Note

Some DVD-Rs, DVD-RWs, CD-Rs, or CD-RWs cannot be played on this player due to the recording quality or physical condition of the disc, or the characteristics of the recording device.
The disc will not play if it has not been correctly finalized. Also, images in DVD-RW discs with CPRM* protection may not be played if they contain a copy protection signal. "Copyright lock" appears on the screen. For more information, see the operating instructions for the recording device. Note that discs created in the Packet Write format cannot be played.
* CPRM (Content Protection for Recordable Media) is a coding technology that protects the copyright of images.

Note on playback operations of DVDs and VIDEO CDs

Some playback operations of DVDs and VIDEO CDs may be intentionally set by software producers. Since this player plays DVDs and VIDEO CDs according to the disc contents the software producers designed, some playback features may not be available. Also, refer to the instructions supplied with the DVDs or VIDEO CDs.

Copyrights

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents, other intellectual property rights owned by Macrovision Corporation, and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

Notes about the Discs

• To keep the disc clean, handle the disc by its edge. Do not touch the surface.

• Do not expose the disc to direct sunlight or heat sources such as hot air ducts, or leave it in a car parked in direct sunlight as the temperature may rise considerably inside the car.
• After playing, store the disc in its case.
• Clean the disc with a cleaning cloth. Wipe the disc from the center out.

• Do not use solvents such as benzine, thinner, commercially available cleaners, or anti-static spray intended for vinyl LPs.
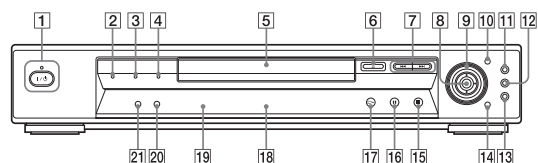
7   8
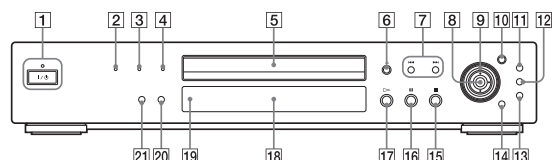
Index to Parts and Controls

For more information, refer to the pages indicated in parentheses.

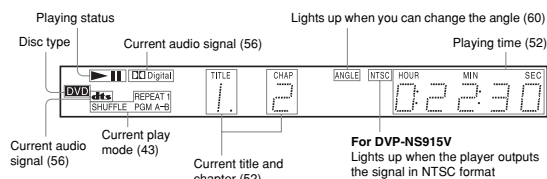### Front panel

DVP-NS755V

DVP-NS915V

A I/⏻ (on/standby) button/indicator (33)
Lights up in green when the power is on and lights up in red when the player is in standby mode.

B PROGRESSIVE indicator (76)
Lights up when outputting progressive signals.

C SUPER AUDIO CD indicator
Lights up when playing a Super Audio CD.

D MULTI CHANNEL indicator
Lights up when:
—playing a disc that contains multiple audio signal channels.
—the disc is not inserted.

E Disc tray (33)

F ⏏ (open/close) button (33)

G |◀◀/▶▶| (previous/next) buttons (34)

H ←/↑/↓/→ ENTER buttons (38)

I Click shuttle (36)

J JOG button/indicator (36)

K TOP MENU button (38)

L MENU button (38) (41)

M ♪⏎ RETURN button (34)

N DISPLAY button (13)

O ■ (stop) button (34)

P ‖ (pause) button (34)

Q ▷ (play) button (33)

R Front panel display (10)

S ⬚ (remote sensor) (16)

T SURROUND button (57)

U PICTURE MODE button (62)

Front panel display

When playing back a DVD VIDEO/DVD-RW

Playing status
Disc type
Current audio signal (56)
Lights up when you can change the angle (60)
Playing time (52)
Current audio signal (56)
Current play mode (43)
Current title and chapter (52)

For DVP-NS915V
Lights up when the player outputs the signal in NTSC format

When playing back a VIDEO CD with Playback Control (PBC) (40)

Disc type   Playing status
Playing time (52)
Current play mode (43)   Current scene (52)

For DVP-NS915V
Lights up when the player outputs the signal in NTSC format
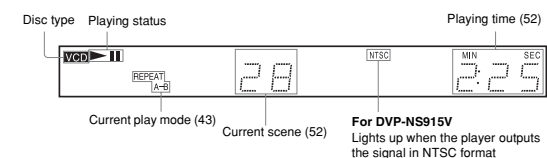
When playing back a CD, Super Audio CD, DATA CD (MP3 audio), or VIDEO CD (without PBC)

Disc type*   Playing status
Lights up when playing the multi-channel playback area on Super audio CDs
Playing time (52)
Current play mode (43)
Lights up when playing MP3 audio tracks (41)
Current track and index (52)

For DVP-NS915V
Lights up when the player outputs the signal in NTSC format
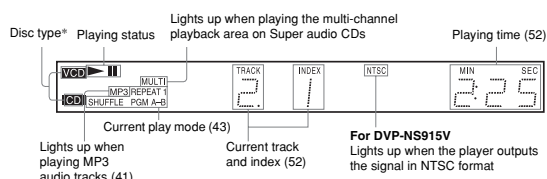
* When playing the HD layer of Super Audio CD discs, the disc type is not displayed.

✿ Hint
You can turn off the front panel display by setting "DIMMER" in "CUSTOM SETUP" to "OFF" in the Setup Display (page 77).

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Rear panel

DVP-NS755V
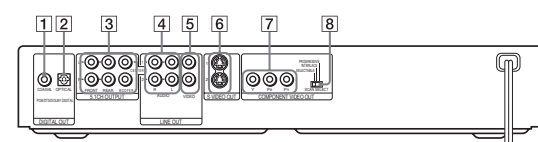
DVP-NS915V
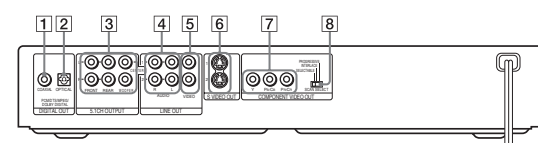
A DIGITAL OUT (COAXIAL) jack (25) (26) (27)

B DIGITAL OUT (OPTICAL) jack (25) (26) (27)

C 5.1CH OUTPUT jacks (27)

D LINE OUT L/R (AUDIO) 1/2 jacks (24) (25) (26)

E LINE OUT (VIDEO) 1/2 jacks (20)

F S VIDEO OUT 1/2 jacks (20)

G COMPONENT VIDEO OUT jacks (20)
The jack names differ depending on the models.
DVP-NS755V: Y, P_B, P_R
DVP-NS915V: Y, P_B/C_B, P_R/C_R

H COMPONENT VIDEO OUT/SCAN SELECT switch (76)

Remote

A TV/DVD switch (70)

B ⏏ OPEN/CLOSE button (34)

C Number buttons (38)
The number 5 button has a tactile dot.*

D CLEAR button (43) (DVP-NS755V only)
CLEAR/-/-- (ten's digit) button (70) (DVP-NS915V only)

E SACD (Super Audio CD)/CD button (40)

F SACD MULTI/2CH (super audio CD multi/2 channel) button (39)

G SUBTITLE button (60)

H AUDIO button (55)
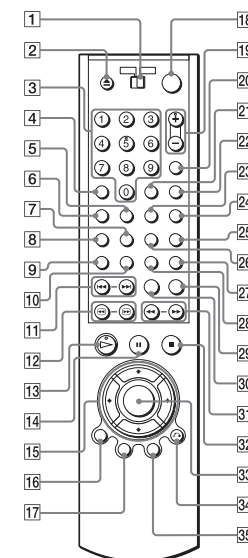
I TIME/TEXT button (51)

J REPEAT button (46)

K |◀◀/▶▶| PREV/NEXT (previous/next) buttons (34)

L ◀‖⏸/⏵‖▶ SEARCH/STEP buttons (35)

M ▷ PLAY button (33)
The ▷ button has a tactile dot.*

N ‖ PAUSE button (34)

O ←/↑/↓/→ buttons (38)

P DISPLAY button (13)

Q TOP MENU button (38)

R I/⏻ (on/standby) button (33)

S VOL (volume) +/− buttons (70)
The + button has a tactile dot.*

T TV/VIDEO button (70)

U ENTER button

V WIDE MODE button (70)

W SHUFFLE button (45)

X A-B button (46)

Y PICTURE NAVI (picture navigation) button (49)

Z ANGLE button (60)

27 PICTURE MODE button (62)

28 SUR (surround) button (57)

29 REPLAY button (34)

30 SEARCH MODE button (48)

31 ◀‖ ◀◀/▶▶ ‖▶ SCAN/SLOW buttons (35)

32 ■ STOP button (34)

33 ENTER button (29)

34 ♪⏎ RETURN button (34)

35 MENU button (38) (41)

* Use the tactile dot as a reference when operating the player.

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Guide to the Control Menu Display

Use the Control Menu to select a function and to view related information. Press DISPLAY repeatedly to turn on or change the Control Menu display as follows:

- Control Menu display 1
  ↓
- Control Menu display 2 (DVD/VIDEO CD only)
  ↓
- ADVANCED display (DVD only. See page 53.)
  ↓
- Control Menu display off
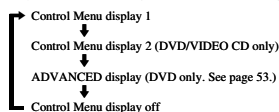
Ö Hint
You can skip the ADVANCED display by setting "OFF" under "ADVANCED" in the Control Menu (page 53).

Control Menu Display

The Control Menu display 1 and 2 will show different items depending on the disc type. For details about each item, please refer to the pages in parentheses.

Example: Control Menu display 1 when playing a DVD VIDEO.

- Currently playing chapter number**
- Currently playing title number*
- Total number of titles*
- Total number of chapters**
- Playback status (► Playback, ‖ Pause, ■ Stop, etc.)
- Control Menu items
- Type of disc being played
- Playing time
- Selected item
- Current setting
- Options
- Function name of selected Control Menu item
- Operation message

```
1 2 ( 2 7 )          PLAY  ►
1 8 ( 3 4 )          DVD VIDEO
T    1 : 3 2 : 5 5

     OFF
     OFF
     1: ENGLISH
     2: FRENCH
     3: SPANISH
SUBTITLE
Select: ⬅⬆⬇➡ ➡ ENTER Cancel: RETURN
```

* Displays the scene number for VIDEO CDs (PBC is on), track number for VIDEO CDs/Super audio CDs/CDs, album number for DATA CDs.
** Displays the index number for VIDEO CDs/Super audio CDs/CDs, MP3 audio track number for DATA CDs.

List of Control Menu Items

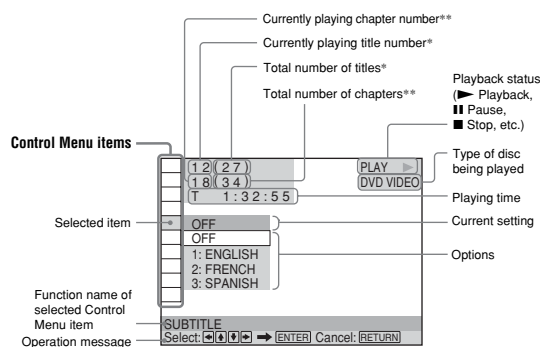| Item	Item Name, Function, Relevant Disc Type
	TITLE (page 48)/SCENE (page 48)/TRACK (page 48) Selects the title, scene, or track to be played. — DVD-V DVD-RW VCD
	CHAPTER (page 48)/INDEX (page 48) Selects the chapter or index to be played. — DVD-V DVD-RW VCD
	ALBUM (page 41) Selects the album to be played. — DATA CD
	TRACK (page 48) Selects the track to be played. — SA-CD CD DATA CD
	INDEX (page 48) Selects the index to be played. — SA-CD CD
	ORIGINAL/PLAY LIST (page 38) Selects the type of titles (DVD-RW) to be played, the ORIGINAL one, or an edited PLAY LIST. — DVD-RW
	TIME/TEXT (page 48) Checks the elapsed time and the remaining playback time. Input the time code for picture and music searching. Displays the DVD/Super Audio CD/CD text, or the DATA CD's track name. — DVD-V DVD-RW VCD SA-CD CD DATA CD
	MULTI/2CH (page 39) Selects the playback area on Super Audio CDs when available. — SA-CD
	AUDIO (page 55) Changes the audio setting. — DVD-V DVD-RW VCD CD DATA CD
	SUBTITLE (page 60) Displays the subtitles. Changes the subtitle language. — DVD-V DVD-RW
	ANGLE (page 60) Changes the angle. — DVD-V
	SURROUND (page 57) Selects the surround functions. — DVD-V DVD-RW VCD CD DATA CD
	ADVANCED (page 53) Displays the information (bit rate or layer) of the disc currently playing. — DVD-V DVD-RW
	PARENTAL CONTROL (page 65) Set to prohibit playback on this player. — DVD-V VCD SA-CD CD
	SETUP (page 73) QUICK Setup (page 29) Use Quick Setup to choose the desired language of the on-screen display, the aspect ratio of the TV, the audio output signal, and the size of the speakers you are using. CUSTOM Setup In addition to the Quick Setup setting, you can adjust various other settings. RESET Returns the settings in "SETUP" to the default setting. — DVD-V DVD-RW VCD SA-CD CD DATA CD

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	PROGRAM (page 43) Selects the title, chapter, or track to play in the order you want. — DVD-V VCD SA-CD CD
	SHUFFLE (page 45) Plays the title, chapter, or track in random order. — DVD-V VCD SA-CD CD
	REPEAT (page 46) Plays the entire disc (all titles/all tracks/all albums) repeatedly or one title/chapter/track/album repeatedly. — DVD-V DVD-RW VCD SA-CD CD DATA CD
	A-B REPEAT (page 46) Specifies the parts you want to play repeatedly. — DVD-V DVD-RW VCD SA-CD CD
	BNR (page 61) Adjusts the picture quality by reducing the "block noise" or mosaic like patterns that appear on your TV screen. — DVD-V DVD-RW VCD
	CUSTOM PICTURE MODE (page 62) Adjusts the video signal from the player. You can select the picture quality that best suits the program you are watching. — DVD-V DVD-RW VCD
	DIGITAL VIDEO ENHANCER (page 64) Exaggerates the outline of the image to produce a sharper picture. — DVD-V DVD-RW VCD
	PICTURE NAVIGATION (page 49) Divides the screen into 9 subscreens to help you find the scene you want quickly. — DVD-V VCD

Ö Hint
The Control Menu icon indicator lights up in green ⌐ ((☐)) ► ((☐)) when you select any item except "OFF." ("SURROUND," "PROGRAM," "SHUFFLE," "REPEAT," "A-B REPEAT," "BNR," "DIGITAL VIDEO ENHANCER" only). The "ANGLE" indicator lights up in green only when the angles can be changed. The "CUSTOM PICTURE MODE" indicator lights up in green when any setting other than "STANDARD" is selected.

Quick Overview

A quick overview presented in this guide will give you enough information to start using the player for your enjoyment. To use the surround sound features of this player, refer to "Hookups" on page 20.

Notes
- You cannot connect this player to a TV that does not have a video input jack.
- Be sure to disconnect the power cord of each component before connecting.

Step 1: Unpacking

Check that you have the following items:
- Audio/video cord (pinplug × 3 ↔ pinplug × 3) (1)
- Remote commander (remote) (1)
- Size AA (R6) batteries (2)

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Step 2: Inserting Batteries Into the Remote

You can control the player using the supplied remote. Insert two Size AA (R6) batteries by matching the ⊕ and ⊖ ends on the batteries to the markings inside the compartment. When using the remote, point it at the remote sensor ⬚ on the player.
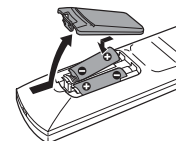
Notes
- Do not leave the remote in an extremely hot or humid place.
- Do not drop any foreign object into the remote casing, particularly when replacing the batteries.
- Do not expose the remote sensor to direct light from the sun or a lighting apparatus. Doing so may cause a malfunction.
- If you do not use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

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Step 3: TV Hookups

Connect the supplied audio/video cord and the power cord in the order (⬜1~⬜3) shown below. Be sure to connect the power cord last.

1 Audio/video cord (supplied)

to video input

to audio input

TV
INPUT
VIDEO (yellow)
L (white)
AUDIO
R (red)

to LINE OUT L/R (AUDIO)1 or 2
to LINE OUT (VIDEO)1 or 2

LINE OUT

2 Power source

CD/DVD Player

⟶ : Signal flow

3 Power source
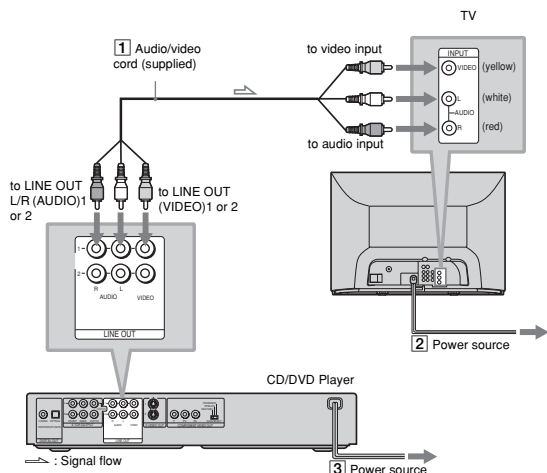
To change the aspect ratio for the connected TV

Depending on the disc and the TV type (standard 4:3 screen TV or wide screen TV), the image may not fit the TV screen. If this happens, change the aspect ratio (page 75).

When connecting to a TV that accepts progressive 480p (525p) format signals

You need to use the COMPONENT VIDEO OUT jacks to view progressive signals. Hook up your TV using pattern **C** on page 20, and then run Quick Setup on page 29.

To change the color system (DVP-NS915V only)

The color system of the player can be set to NTSC or PAL. If the on-screen display does not appear on the TV, change the color system of the player to match the color system of the connected TV (NTSC or PAL). To change the color system, hold I/⏻ down for a few seconds while pressing ⏸ on the player.

Step 4: Playing a Disc

Example: DVP-NS755V
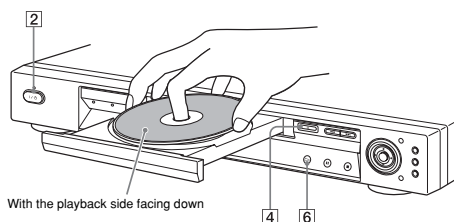
2

With the playback side facing down

4 6

A Turn on the TV.

B Press I/⏻ on the player.

C Switch the input selector on your TV so that the signal from the player appears on the TV screen.

D Press ⏏ on the player to open the disc tray.

E Place the disc on the tray with the playback side facing down.

F Press ▷.
The disc tray closes and the player begins playing the disc.

After step 6

Depending on the disc, a menu may be displayed on the TV screen. If so, select the item you want from the menu and play the DVD VIDEO (page 38) or VIDEO CD disc (page 40).

To stop playing

Press ∎.

To remove the disc

Press ⏏.

To turn off the player

Press I/⏻. The player enters standby mode and the power indicator lights up in red.

💡 **Hints**
• To check the current setting of the player's color system, press I/⏻. The power indicator lights up in green. If "NTSC" appears on the front panel display, the color system of the player is set to NTSC. If not, the color system is set to PAL.
• When connecting to a monaural TV, use a stereo-mono conversion cord (not supplied). Connect the LINE OUT (VIDEO) 1/2 jack on the player to the TV's video input jack, and connect the LINE OUT L/R (AUDIO) 1/2 jacks to the TV's audio input jack.

Hooking Up the Player

Follow steps 1 to 4 to hook up and adjust the settings of the player.
Before you start, disconnect the power cords, check that you have all of the supplied accessories, and insert the batteries into the remote (page 16).

Notes
• Plug cords securely to prevent unwanted noise.
• Refer to the instructions supplied with the components to be connected.

Step 1: Connecting the Video Cords

Connect this player to your TV monitor, projector, or AV amplifier (receiver) using a video cord. Select one of the patterns **A** through **C**, according to the input jack on your TV monitor, projector, or AV amplifier (receiver). In order to view progressive signal pictures with a compatible TV, projector, or monitor, you must use connection **C**.

A
INPUT
VIDEO
L
AUDIO
R
TV, projector or AV amplifier (receiver)

(yellow)

Audio/video cord (supplied)

Component video cord (not supplied)

C
COMPONENT VIDEO IN
Y (green)
P_B (blue)
P_R (red)
TV, projector or AV amplifier (receiver)

(yellow)

(green) (blue) (red)

to LINE OUT (VIDEO)1 or 2

to COMPONENT VIDEO OUT

CD/DVD player

to S VIDEO OUT 1 or 2

S VIDEO cord (not supplied)

INPUT
S VIDEO
TV, projector or AV amplifier (receiver)
B

⟶ : Signal flow

A **If you are connecting to a video input jack**

Connect the yellow plug of the audio/video cord (supplied) to the yellow (video) jacks. You will enjoy standard quality images.

Yellow (Video) ————— Yellow (Video)
White (L) ————— White (L)
Red (R) ————— Red (R)

Use the red and white plugs to connect to the audio input jacks (page 24). (Do this if you are connecting to a TV only.)

B **If you are connecting to an S VIDEO input jack**

Connect an S VIDEO cord (not supplied). You will enjoy high quality images.

C **If you are connecting to a monitor, projector, or AV amplifier (receiver) having component video input jacks (Y, P_B, P_R or Y, P_B/C_B, P_R/C_R)**

Connect the component via the COMPONENT VIDEO OUT jacks using a component video cord (not supplied) or three video cords (not supplied) of the same kind and length. You will enjoy accurate color reproduction and high quality images. If your TV accepts progressive 480p (525p) format signals, you must use this connection and set "COMPONENT OUT" to "PROGRESSIVE" in "SCREEN SETUP" (page 76).

Green ————— Green
Blue ————— Blue
Red ————— Red

For DVP-NS915V
You can switch the player's color system to match the color system of the connected TV (page 17).

Notes

• Do not connect a VCR, etc. between your TV and the player. If you pass the player signals via the VCR, you may not receive a clear image on the TV screen. If your TV has only one audio/video input jack, connect the player to this jack.

VCR

CD/DVD player → TV
Connect directly
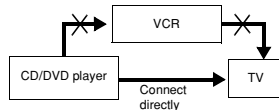
• Consumers should note that not all high definition television sets are fully compatible with this product and may cause artifacts to be displayed in the picture. In the case of progressive scan picture problems, it is recommended that you switch the connection to the standard definition output. If there are questions regarding your Sony TV set's compatibility with this DVD player, please contact our customer service center.

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ॐ **Hint**
If you connect an AV amplifier (receiver) that conforms to the 96 kHz sampling frequency, use connection **D** .

* Manufactured under license from Dolby Laboratories. "Dolby," "Pro Logic," and the double-D symbol are trademarks of Dolby Laboratories.
** Manufactured under license from Digital Theater Systems, Inc. US Pat. No. 5,451,942, 5,956,674, 5,974,380, 5,978,762 and other world-wide patents issued and pending. "DTS" and "DTS Digital Surround" are registered trademarks of Digital Theater Systems, Inc. Copyright 1996, 2000 Digital Theater Systems, Inc. All rights reserved.

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Step 2: Connecting the Audio Cords

Refer to the chart below to select the connection that best suits your system. Be sure to also read the instructions for the components you wish to connect.

Select a connection

Select one of the following connections, **A** through **D** .

Components to be connected	Connection	Your setup (example)
TV • Surround effects: TVS DYNAMIC (page 57), TVS WIDE (page 57)	**A** (page 24)	
Stereo amplifier (receiver) and two speakers • Surround effects: TVS STANDARD (page 58) or **MD deck/DAT deck** • Surround effects: TVS STANDARD (page 58).	**B** (page 25)	
AV amplifier (receiver) having a Dolby* Surround (Pro Logic) decoder and 3 to 6 speakers • Surround effects: Dolby Surround (Pro Logic) (page 87)	**C** (page 26)	
AV amplifier (receiver) with 5.1 ch input jacks and 4 to 6 speakers • Surround effects: – Dolby Digital (5.1 ch) (page 87) – DTS (5.1 ch) (page 87) – Super Audio CD Multi channel (page 88) – MPEG audio (5.1 ch) (page 88) or **AV amplifier (receiver) with digital input jacks having a Dolby, DTS** or MPEG audio decoder and 6 speakers** • Surround effects: – Dolby Digital (5.1ch) (page 87) – DTS (5.1ch) (page 87) – MPEG audio (5.1 ch) (page 88)	**D** (page 27)	
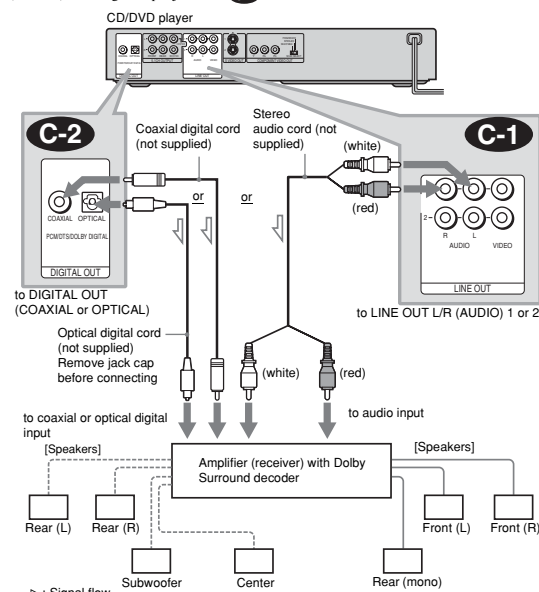
22

A **Connecting to your TV**

This connection will use your TV speakers for sound.

CD/DVD player

A

(yellow)* (yellow) TV
(white) (white)
(red) (red)

to LINE OUT L/R (AUDIO) 1 or 2

Audio/video cord (supplied)

to audio input

⟹ : Signal flow

* The yellow plug is used for video signals (page 20).

ॐ **Hint**
When connecting to a monaural TV, use a stereo-mono conversion cord (not supplied). Connect the LINE OUT L/R (AUDIO) 1/2 jacks to the TV's audio input jack.

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Step 3: Connecting the Power Cord

Plug the player and TV power cords into an AC outlet.

Step 4: Quick Setup

Follow the steps below to make the minimum number of basic adjustments for using the player.
To skip an adjustment, press ►►I. To return to the previous adjustment, press I◄◄ .
The on-screen displays differ depending on the player model.
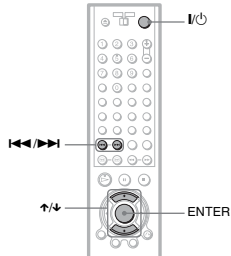
1 Turn on the TV.

2 Press I/⏻.

3 Switch the input selector on your TV so that the signal from the player appears on the TV screen.

"Press [ENTER] to run QUICK SETUP" appears at the bottom of the screen. If this message does not appear, select "QUICK" under "SETUP" in the Control Menu to run Quick Setup (page 74).

4 Press ENTER without inserting a disc.

The Setup Display for selecting the language used in the on-screen display appears.
The available languages differ depending upon the player model.

```
LANGUAGE SETUP
OSD:            ENGLISH
MENU:           ENGLISH
AUDIO:          FRENCH
SUBTITLE:       SPANISH
                PORTUGUESE
```
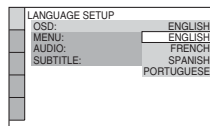
5 Press ↑/↓ to select a language.

The player uses the language selected here to display the menu and subtitles as well.

➔continued **29**

6 Press ENTER.

The Setup Display for selecting the aspect ratio of the TV to be connected appears.

```
SCREEN SETUP
TV TYPE:         4:3 LETTER BOX
SCREEN SAVER:    4:3 LETTER BOX
BACKGROUND:      4:3 PAN SCAN
COMPONENT OUT:   16:9
  MODE:          AUTO
```

7 Press ↑/↓ to select the setting that matches your TV type.

◆ **If you have a 4:3 standard TV**
• 4:3 LETTER BOX or 4:3 PAN SCAN (page 75)

◆ **If you have a wide-screen TV or a 4:3 standard TV with a wide-screen mode**
• 16:9 (page 75)

8 Press ENTER.

The Setup Display for selecting the type of video signal appears.

```
SCREEN SETUP
TV TYPE:         4:3 LETTER BOX
SCREEN SAVER:    ON
BACKGROUND:      JACKET PICTURE
COMPONENT OUT:   INTERLACE
  MODE:          INTERLACE
                 PROGRESSIVE
```

9 Press ↑/↓ to select the type of signals you wish to output to your TV.

Select PROGRESSIVE only if you have made video connection ❻ (page 20) and wish to view progressive video signals.

◆ **Interlace format TV (standard TV)**
• INTERLACE (pages 76)

◆ **Progressive format TV**
• PROGRESSIVE (pages 76)

30

10 Press ENTER.

The Setup Display for selecting the type of jack used to connect your amplifier (receiver) appears.

```
Is this player connected to an amplifier
(receiver) ? Select the type of jack you
are using.
  YES
    LINE OUTPUT L/R (AUDIO)
    DIGITAL OUTPUT
    DIGITAL & 5.1CH OUTPUT
  NO
```

11 Press ↑/↓ to select the type of jack (if any) you are using to connect to an amplifier (receiver), then press ENTER.

Choose the item that matches the audio connection you selected on pages 24 to 27 (Ⓐ through Ⓓ).

Ⓐ
• If you connect just a TV and nothing else, select "NO." Quick Setup is finished and connections are complete.

Ⓑ-1 Ⓒ-1
• Select "LINE OUTPUT L/R (AUDIO)." Quick Setup is finished and connections are complete.

Ⓑ-2 Ⓒ-2 Ⓓ-2
• Select "DIGITAL OUTPUT." The Setup Display for "DOLBY DIGITAL" appears.

Ⓓ-1 or both Ⓓ-1 and Ⓓ-2
• Select "DIGITAL & 5.1CH OUTPUT." The Setup Display for "DOLBY DIGITAL" appears.

12 Press ↑/↓ to select the type of Dolby Digital signal you wish to send to your amplifier (receiver).

Choose the signal that matches the audio connection you selected on pages 25 to 27 (Ⓑ through Ⓓ).

```
AUDIO SETUP
AUDIO ATT:         OFF
AUDIO DRC:         STANDARD
AUDIO FILTER:      SHARP
DOWNMIX:           DOLBY SURROUND
DIGITAL OUT:       ON
DOLBY DIGITAL:     D-PCM
DTS:               D-PCM
48kHz/96kHz PCM:   DOLBY DIGITAL
```

Ⓑ-2 Ⓒ-2
• D-PCM (page 79)

Ⓓ-2
• DOLBY DIGITAL (only if the amplifier (receiver) has a Dolby Digital decoder) (page 79)

13 Press ENTER.

"DTS" is selected.

```
AUDIO SETUP
AUDIO ATT:         OFF
AUDIO DRC:         STANDARD
AUDIO FILTER:      SHARP
DOWNMIX:           DOLBY SURROUND
DIGITAL OUT:       ON
DOLBY DIGITAL:     D-PCM
DTS:               D-PCM
48kHz/96kHz PCM:   DTS
```

14 Press ↑/↓ to select the type of DTS signal sent to your amplifier (receiver).

Choose the item that matches the audio connection you selected on pages 25 to 27 (Ⓑ through Ⓓ).

Ⓑ-2 Ⓒ-2
• D-PCM (page 80)

Ⓓ-2
• DTS (only if the amplifier (receiver) has a DTS decoder) (page 80)

15 Press ENTER.

◆ **When "DIGITAL OUTPUT" is selected in step 11**
• Quick Setup is finished and connections are complete.
For DVP-NS915V
• If your AV amplifier (receiver) has an MPEG audio decoder, set "MPEG" to "MPEG" (page 80).

◆ **When "DIGITAL & 5.1CH OUTPUT" is selected in step 11**
• The Setup Display for "SPEAKER SETUP" appears.

16 Press ↑/↓ to select the size of the center speaker.

If no center speaker is connected, select "NONE" (page 81).

```
SPEAKER SETUP
SIZE:
DISTANCE:
BALANCE:
LEVEL:
TEST TONE:     OFF
  FRONT:         LARGE
  CENTER:        NONE
  REAR:          NONE
  SUBWOOFER:     LARGE
                 SMALL
```
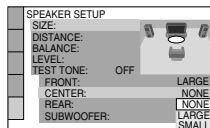
17 Press ENTER.

"REAR" is selected.

```
SPEAKER SETUP
SIZE:
DISTANCE:
BALANCE:
LEVEL:
TEST TONE:     OFF
  FRONT:         LARGE
  CENTER:        LARGE
  REAR:          NONE
  SUBWOOFER:     NONE
                 LARGE(REAR)
```
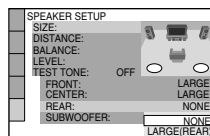
18 Press ↑/↓ to select the size of the rear speakers.

If no rear speaker is connected, select "NONE."
"SIDE" and "REAR" refer to the speaker position relative to your listening position (page 81).

19 Press ENTER.

"SUBWOOFER" is selected.

```
SPEAKER SETUP
SIZE:
DISTANCE:
BALANCE:
LEVEL:
TEST TONE:     OFF
  FRONT:         LARGE
  CENTER:        LARGE
  REAR:          LARGE(REAR)
  SUBWOOFER:     NONE
                 NONE
                 YES
```

20 Press ↑/↓ to select whether or not you have connected a subwoofer.

21 Press ENTER.

Quick Setup is finished. All connections and setup operations are complete.

➔continued **31**

32

Enjoying the surround sound effects

To enjoy the surround sound effects of this player or your amplifier (receiver), set the following items as described below for the audio connection you selected on pages 25 to 27 (Ⓑ through Ⓓ). Each of these is the default setting and does not need to be adjusted when you first connect the player. Refer to page 73 for using the Setup Display.

Audio Connection (pages 24 to 27)

Ⓐ
• No additional settings are needed.

Ⓑ-1 Ⓒ-1
• Set "DOWNMIX" to "DOLBY SURROUND" (page 79).
• If the sound distorts even when the volume is turned down, set "AUDIO ATT" to "ON" (page 78).

Ⓑ-2 Ⓒ-2 Ⓓ-2
• Set "DOWNMIX" to "DOLBY SURROUND" (page 79).
• Set "DIGITAL OUT" to "ON" (page 79).
• Set "48kHz/96kHz PCM" to "96kHz/24bit," only if you connect an amplifier (receiver) that conforms to the 96 kHz sampling frequency (page 80).

Ⓓ-1
• Set "DISTANCE," "BALANCE," and "LEVEL" according to the connected speakers (page 82).
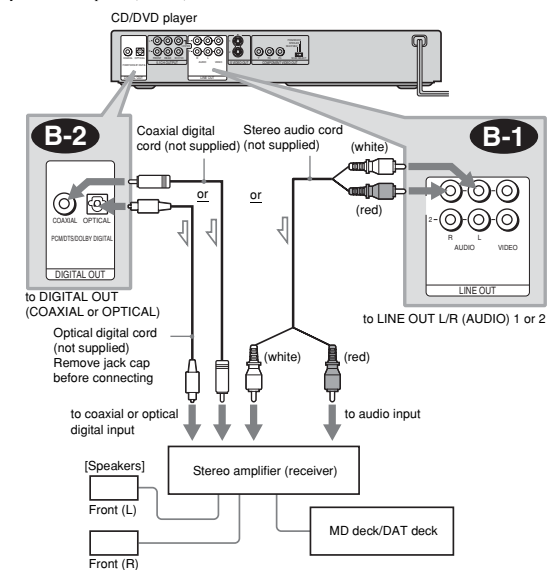• If the sound distorts even when the volume is turned down, set "AUDIO ATT" to "ON" (page 78).

1-7

Playing Discs DVD-V

DVD-RW VCD SA-CD CD DATA CD

Depending on the DVD or VIDEO CD, some operations may be different or restricted. Refer to the operating instructions supplied with your disc.

Example: DVP-NS755V

Power indicator

I/⏻

▷
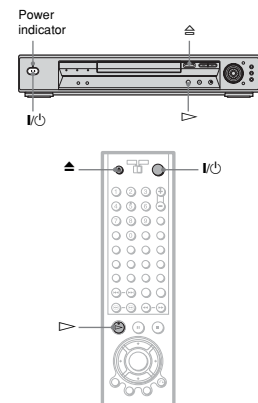
1 Turn on your TV.

2 Press I/⏻.

The player turns on and the power indicator lights up in green.

3 Switch the input selector on your TV so that the signal from the player appears on the TV screen.

◆ **When using an amplifier (receiver)**
Turn on the amplifier (receiver) and select the appropriate channel so that you can hear sound from the player.

4 Press ⏏ on the player, and place a disc on the disc tray.

With the playback side facing down

5 Press ▷.

The disc tray closes, and the player starts playback (continuous play). Adjust the volume on the TV or the amplifier (receiver).
Depending on the disc, a menu may appear on the TV screen. For DVD VIDEOs, see page 38. For VIDEO CDs, see page 40.

To turn off the player
Press I/⏻. The player enters standby mode.

ʊ̈ **Hint**
For DVP-NS915V
The player will turn off automatically whenever you leave it in stop mode for more than 30 minutes (Auto Power Off function).
For DVP-NS755V
You can have the player turn off automatically whenever you leave it in stop mode for more than 30 minutes. To turn on this function, set "AUTO POWER OFF" in "CUSTOM SETUP" to "ON" (the default setting is "OFF") (page 77).

Note
Super Audio CD audio signals are not output from the digital jack.

Additional operations

⏏

I◀◀/▶▶I   REPLAY
▷
II
■
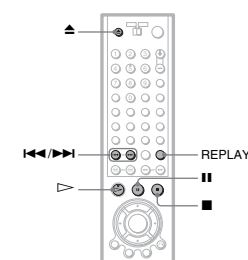
To	Operation
Stop	Press ■
Pause	Press II
Resume play after pause	Press II or ▷
Go to the next chapter, track, or scene in continuous play mode	Press ▶▶I
Go back to the previous chapter, track, or scene in continuous play mode	Press I◀◀
Stop play and remove the disc	Press ⏏
Replay the previous scene (DVD VIDEO only)	Press REPLAY

ʊ̈ **Hint**
The Replay function is useful when you want to review a scene or dialog that you missed.

Note
You may not be able to use the Replay function with some scenes.

Locking the disc tray (Child Lock)

You can lock the disc tray to prevent children from opening it.

I/⏻
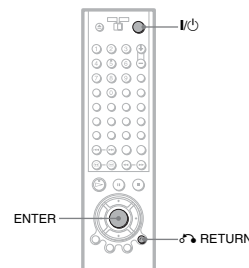
ENTER

RETURN

When the player is in standby mode, press RETURN, ENTER, and then I/⏻ on the remote.
The player turns on and "LOCKED" appears on the front panel display.
The ⏏ button on the player or the remote does not work while the Child Lock is set.

To unlock the disc tray
When the player is in standby mode, press RETURN, ENTER, and then I/⏻ again.

Note
Even if you select "RESET" under "SETUP" in the Control Menu (page 74), the disc tray remains locked.

34

Searching for a Particular Point on a Disc (Search, Scan, Slow-motion Play, Freeze Frame)

You can quickly locate a particular point on a disc by monitoring the picture or playing back slowly.

◀I ◀◀
◀II◀◀/▷II▶▶
▷
▶▶ I▶
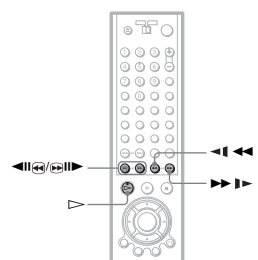
Note
Depending on the DVD/VIDEO CD, you may not be able to do some of the operations described.

Locating a point quickly (Search)

DVD-V DVD-RW VCD SA-CD CD DATA CD

During playback, keep pressing ▷II▶ to locate a point in the playback direction or keep pressing ◀II◀ to locate a point in the opposite direction. When you find the point you want, release the button to return to normal playback speed.

Locating a point quickly by playing a disc in fast forward or fast reverse (Scan) DVD-V DVD-RW

VCD SA-CD CD DATA CD

Press ◀I ◀◀ or ▶▶ I▶ while playing a disc. When you find the point you want, press ▷ to return to normal speed. Each time you press ◀I ◀◀ or ▶▶ I▶ during scan, the playback speed changes. Three speeds are

available. With each press the indication changes as follows:

Playback direction
×2▶ (DVD VIDEO/Super Audio CD/CD only)

FF2▶▶ ← FF1▶▶ ←

Opposite direction
×2◀ (DVD VIDEO only) ← FR1◀◀ → FR2◀◀

The "×2▶"/"×2◀" playback speed is about twice the normal speed. The "FF2▶▶"/ "FR2◀◀" playback speed is faster than "FF1▶▶"/"FR1◀◀."

Watching frame by frame (Slow-motion play) DVD-V DVD-RW VCD

Press ◀I ◀◀ or ▶▶ I▶ when the player is in pause mode. To return to the normal speed, press ▷.
Each time you press ◀I ◀◀ or ▶▶ I▶ during Slow-motion play, the playback speed changes. Two speeds are available. With each press the indication changes as follows:

Playback direction
SLOW2 I▶ ←→ SLOW1 I▶

Opposite direction (DVD only)
SLOW2 ◀I ←→ SLOW1 ◀I

The "SLOW2 I▶"/"SLOW2 ◀I" playback speed is slower than "SLOW1 I▶"/"SLOW1 ◀I."

Playing one frame at a time (Freeze Frame) DVD-V DVD-RW VCD

When the player is in the pause mode, press ▷II▶ to go to the next frame. Press ◀II◀ to go to the preceding frame (DVD only). If you hold the button down, you can view the frames in succession. To return to normal playback, press ▷.

Using the click shuttle on the player (Shuttle mode)

DVD-V DVD-RW VCD SA-CD CD DATA CD

Example: DVP-NS755V

JOG
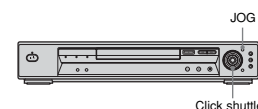
Click shuttle

Turn the click shuttle on the player. The playback speed changes depending on the turning direction and degree of rotation as follows:

◆ **During playback**
FF2▶▶ Fast forward (faster than FF1▶▶)
↕
FF1▶▶ Fast forward
↕
×2▶ (DVD VIDEO/Super Audio CD/ CD only)
↕
PLAY▶ (normal speed)
↕
×2◀ (DVD VIDEO only)
↕
FR1◀◀ Fast rewind
↕
FR2◀◀ Fast rewind (faster than FR1◀◀)

If you turn the click shuttle quickly, the playback speed goes to "FF2▶▶" or "FR2◀◀" at once.

◆ **During pause mode (DVD VIDEO, DVD-RW, VIDEO CD only)**
SLOW1 I▶ (playback direction)
↕
SLOW2 I▶ (playback direction – slower than SLOW1 I▶)
↕
PAUSE II
↕
SLOW2 ◀I (opposite direction – slower than SLOW1 ◀I) (DVD only)
↕
SLOW1 ◀I (opposite direction) (DVD only)

To return to normal play
Press ▷.

Playing a disc frame by frame using the click shuttle (Jog mode) DVD-V DVD-RW VCD

1 Press JOG.
The indicator lights up and the player enters pause mode.

2 Turn the click shuttle.
Depending on the turning speed, playback goes to frame-by-frame playback in the direction that the click shuttle is turned. Turn the click shuttle clockwise to go forward, and counterclockwise to rewind (DVD only). If you turn the click shuttle at a constant speed for a while, the playback speed goes to slow or normal.

To return to normal play
Press ▷.

To turn off the Jog mode
Press JOG again so that the indicator turns off.

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Resuming Playback From the Point Where You Stopped the Disc (Multi-disc Resume) `DVD-V` `VCD`

The player stores the point where you stopped the disc for up to 40 discs and resumes playback the next time you insert the same disc. When you store a resume playback point for the 41st disc, the resume playback point for the first disc is deleted.
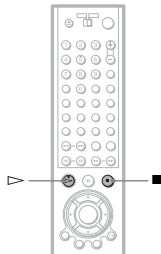
1 **While playing a disc, press ■ to stop playback.**

"RESUME" appears on the front panel display.

2 **Press ▷.**

The player starts playback from the point where you stopped the disc in step 1.

☼ Hints
• To play from the beginning of the disc, press ■ twice, then press ▷.
• For DVD-RWs in VR mode, CDs, Super Audio CDs, and DATA CDs, the player remembers the resume playback point for the current disc unless the disc tray is opened, the power cord is disconnected, or only for DATA CDs, the player enters standby mode.

Notes
• "MULTI-DISC RESUME" in "CUSTOM SETUP" must be set to "ON" (default) for this function to work (page 78).
• The resume playback point for the current disc is cleared when:
  – you change the play mode.
  – you change the settings on the Setup Display.
• Resume Play does not work during Shuffle Play and Program Play.
• This function may not work with some discs.

Using the DVD's Menu `DVD-V`

A DVD is divided into long sections of a picture or a music feature called "titles." When you play a DVD which contains several titles, you can select the title you want using the TOP MENU button.
When you play DVDs that allow you to select items such as the language for the subtitles and the language for the sound, select these items using the MENU button.
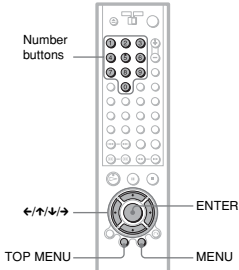
1 **Press TOP MENU or MENU.**

The disc's menu appears on the TV screen.
The contents of the menu vary from disc to disc.

2 **Press ←/↑/↓/→ or the number buttons to select the item you want to play or change.**

3 **Press ENTER.**

☼ Hint
The disc's menu also appears when the TOP MENU or MENU button on the player is pressed.

Selecting "ORIGINAL" or "PLAY LIST" on a DVD-RW Disc `DVD-RW`

Some DVD-RW discs in VR (Video Recording) mode have two types of titles for playback: originally recorded titles (ORIGINAL) and titles that can be created on recordable DVD players for editing (PLAY LIST). You can select the type of titles to be played.
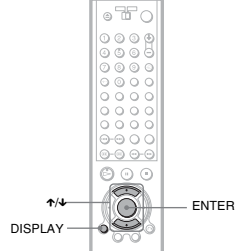
1 **Press DISPLAY in stop mode.**

The Control Menu appears.

2 **Press ↑/↓ to select [ ] (ORIGINAL/PLAY LIST), then press ENTER.**

The options for "ORIGINAL/PLAY LIST" appear.

---
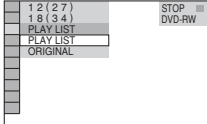
3 **Press ↑/↓ to select the setting.**

• PLAY LIST: plays the titles created from "ORIGINAL" for editing.
• ORIGINAL: plays the titles originally recorded.

4 **Press ENTER.**

To turn off the Control Menu
Press DISPLAY repeatedly until the Control Menu is turned off.
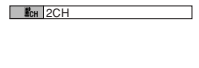
Selecting a Playback Area for a Super Audio CD Disc `SA-CD`
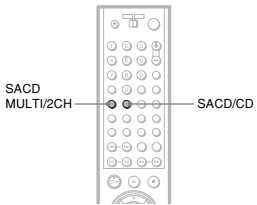
Selecting a playback area on a 2 channel + Multi-channel Super Audio CD

Some Super Audio CDs consist of a 2 channel playback area and a multi-channel playback area. You can select the playback area you want to listen to.

1 **Press SACD MULTI/2CH in stop mode.**

The following display appears.

2 **Press SACD MULTI/2CH repeatedly to select the item.**

• MULTI: plays a multi-channel playback area.
• 2CH: plays a 2 channel playback area. The "MULTI" indicator in the front panel display lights up when playing a multi-channel playback area.

☼ Hint
You can also select "MULTI/2CH" from the Control Menu (page 13).

Selecting a playback layer when playing a hybrid Super Audio CD

Some Super Audio CDs consist of an HD layer and a CD layer. You can select the playback layer you want to listen to.

Press SACD/CD in stop mode.

Each time you press the button, an HD layer or a CD layer is alternately selected. When playing a CD layer, the "CD" indicator in the front panel display lights up.

Notes
• For details about Super Audio CD discs, see page 88.
• Each play mode function works only within the selected layer or playback area.

Playing VIDEO CDs With PBC Functions (PBC Playback) `VCD`

PBC (Playback Control) allows you to play VIDEO CDs interactively by following the menu on the TV screen.
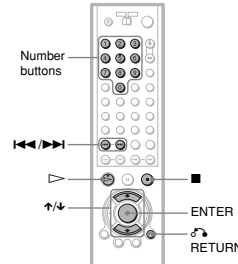
1 **Start playing a VIDEO CD with PBC functions.**

The menu for your selection appears.

2 **Select the item number you want by pressing ↑/↓ or the number buttons.**

3 **Press ENTER.**

4 **Follow the instructions in the menu for interactive operations.**

Refer to the instructions supplied with the disc, as the operating procedure may differ depending on the VIDEO CD.

To return to the menu
Press O RETURN.

✧ Hint
To play without using PBC, press |◀◀ /▶▶| or the number buttons while the player is stopped to select a track, then press ▷ or ENTER.
"Play without PBC" appears on the TV screen and the player starts continuous play. You cannot play still pictures such as a menu.
To return to PBC playback, press ■ twice then press ▷.

Notes
• Depending on the VIDEO CD, "Press ENTER" in step 3 may appear as "Press SELECT" in the instructions supplied with the disc. In this case, press ▷.
• The PBC functions of Super VCDs do not work with this player. Super VCDs are played in continuous play mode only.

Playing an MP3 Audio Track [DATA CD]

You can play back DATA CDs (CD-ROMs/CD-Rs/CD-RWs) recorded in MP3 (MPEG1 Audio Layer 3) format.
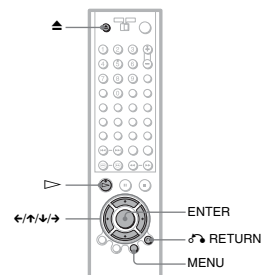
1 Press ⏏ and place a DATA CD on the disc tray.

2 Press ▷.
The disc tray closes, and the player starts to play the first MP3 audio track in the first album on the disc.

Notes
• The player can play MP3 audio tracks recorded in the following sampling frequencies: 32 kHz, 44.1 kHz, 48 kHz.
• The playback order may be different from the edited order. See "The Playback order of MP3 audio tracks" below for details.

Selecting an album and track

1 Press MENU.
The list of MP3 albums recorded on the DATA CD appears.

---

2 Select an album using ↑/↓ and press ENTER.
The list of tracks contained in the album appears.
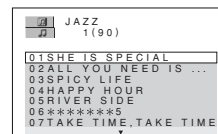
3 Select a track using ↑/↓ and press ENTER.
The selected track starts playing.
When a track or album is being played, its title is shaded.

To go to the next or previous page
Press → or ←.

To return to the previous display
Press O RETURN.

To turn off the display
Press MENU.

Notes
• Only the letters in the alphabet and numbers can be used for album or track names. Anything else is displayed as "∗."
• ID3 tags cannot be displayed.

About MP3 audio tracks

You can play MP3 audio tracks on CD-ROMs, CD-Rs, or CD-RWs. However, the discs must be recorded according to ISO9660 level 1, level 2, or Joliet format for the player to recognize the tracks.
You can also play discs recorded in Multi Session.

See the instructions of the CD-R/RW device or recording software (not supplied) for details on the recording format.

To play a Multi Session CD
This player can play Multi Session CDs when an MP3 audio track is located in the first session. Any subsequent MP3 audio tracks, recorded in the later sessions, can also be played back.
When audio tracks and images in music CD format or video CD format are recorded in the first session, only the first session will be played back.

Notes
• If you put the extension ".MP3" to data not in MP3 format, the player cannot recognize the data properly and will generate a loud noise which could damage your speaker system.
• The player cannot play audio tracks in MP3PRO format.

The Playback order of MP3 audio tracks
The playback order of albums and tracks recorded on a DATA CD is as follows.
◆Structure of disc contents
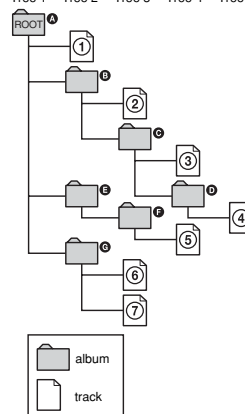
When you insert a DATA CD and press ▷, the numbered tracks are played sequentially, from ① through ⑦. Any sub-albums/tracks contained within a currently selected album take priority over the next album in the same tree. (Example: **C** contains **D** so ④ is played before ⑤.)
When you press MENU and the list of MP3 albums appears (page 41), the albums are arranged in the following order: **A** → **B** → **C** → **D** → **F** → **G**. Albums that do not contain tracks (such as album **E**) do not appear in the list.

✧ Hints
• If you add numbers (01, 02, 03, etc.) to the front of the track file names, the tracks will be played in that order.
• Since a disc with many trees takes longer to start playback, it is recommended that you create albums of no more than two trees.

Notes
• Depending on the software you use to create the DATA CD, the playback order may differ from the illustration above.
• The playback order above may not be applicable if there are more than a total of 999 albums and tracks in the DATA CD.
• The player can recognize up to 499 albums (the player will count just albums, including albums that do not contain MP3 audio tracks). The player will not play any albums beyond the first 499 albums. Of the first 499 albums, the player will play no more than a combined total of 999 albums and tracks.

Various Play Mode Functions (Program Play, Shuffle Play, Repeat Play, A-B Repeat Play)

You can set the following play modes:
• Program Play (page 43)
• Shuffle Play (page 45)
• Repeat Play (page 46)
• A-B Repeat Play (page 46)

Note
The play mode is canceled when:
– you open the disc tray.
– the player enters standby mode by pressing I/○.

Creating your own program (Program Play) [DVD-V] [VCD] [SA-CD] [CD]

You can play the contents of a disc in the order you want by arranging the order of the titles, chapters, or tracks on the disc to create your own program. You can program up to 99 titles, chapters, and tracks.
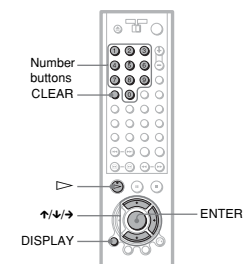
1 Press DISPLAY twice (when playing a Super Audio CD/CD, press once).
The Control Menu appears.

2 Press ↑/↓ to select ▣ (PROGRAM), then press ENTER.
The options for "PROGRAM" appear.

---
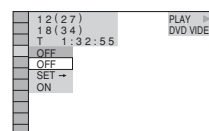
3 Press ↑/↓ to select "SET →," then press ENTER.
"TRACK" is displayed when you play a VIDEO CD, Super Audio CD, or CD.
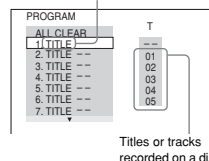
Titles or tracks recorded on a disc

4 Press →.
The cursor moves to the title or track row "T" (in this case, "01").
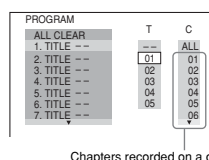
Chapters recorded on a disc

5 Select the title, chapter, or track you want to program.
◆ When playing a DVD VIDEO
For example, select chapter "03" of title "02."
Press ↑/↓ or the number buttons to select "02" under "T," then press ENTER.
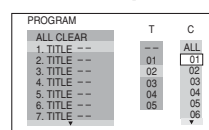
Next, press ↑/↓ or the number buttons to select "03" under "C," then press ENTER.
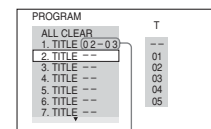
Selected title and chapter

◆ When playing a VIDEO CD, Super Audio CD, or CD
For example, select track "02."
Press ↑/↓ or the number buttons to select "02" under "T," then press ENTER.
The track number may be displayed in 3 digits for a Super Audio CD.
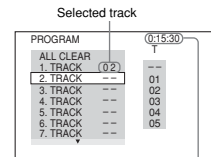
Selected track

Total time of the programmed tracks

6 To program other titles, chapters, or tracks, repeat steps 4 and 5.
The programmed titles, chapters, and tracks are displayed in the selected order.

7 Press ▷ to start Program Play.
Program Play begins.
When the program ends, you can restart the same program again by pressing ▷.

To return to normal play
Press CLEAR, or select "OFF" in step 3. To play the same program again, select "ON" in step 3 and press ENTER.

To turn off the display
Press DISPLAY repeatedly until the display is turned off.

To change or cancel a program

1 Follow steps 1 through 3 of "Creating your own program (Program Play)."

2 Select the program number of the title, chapter, or track you want to change or cancel using ↑/↓ or the number buttons, and press →.

3 Follow step 5 for new programming. To cancel a program, select "--" under "T," then press ENTER.

To cancel all the titles, chapters, or tracks in the programmed order

1 Follow steps 1 through 3 of "Creating your own program (Program Play)."

2 Press ↑ and select "ALL CLEAR."

3 Press ENTER.

✍ Hint
You can do Repeat Play or Shuffle Play of the programmed titles, chapters, or tracks. During Program Play, follow the steps of "Repeat Play" (page 46) or "Shuffle Play" (page 45).

Note
When playing Super VCDs, the total time of the programmed tracks does not appear on the screen.

Playing in random order (Shuffle Play) DVD-V VCD SA-CD CD

You can have the player "shuffle" titles, chapters, or tracks. Subsequent "shuffling" may produce a different playing order.
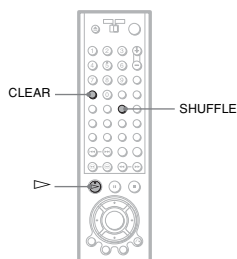
1 Press SHUFFLE during playback.
The following display appears.
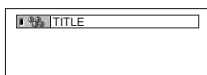
2 Press SHUFFLE repeatedly to select the item to be shuffled.

◆ **When playing a DVD VIDEO**
• TITLE
• CHAPTER

◆ **When playing a VIDEO CD, Super Audio CD, or CD**
• TRACK

◆ **When Program Play is activated**
• ON: shuffles titles, chapters, or tracks selected in Program Play.

To return to normal play
Press CLEAR, or select "OFF" in step 2.

✍ Hints
• You can set Shuffle Play while the player is stopped. After selecting the "SHUFFLE" option, press ▷. Shuffle Play starts.
• Up to 200 chapters in a disc can be played in random order when "CHAPTER" is selected.
• You can also select "SHUFFLE" from the Control Menu (page 13).

Playing repeatedly (Repeat Play)
DVD-V DVD-RW VCD SA-CD CD DATA CD

You can play all of the titles or tracks on a disc or a single title, chapter, or track repeatedly.
You can use a combination of Shuffle or Program Play modes.
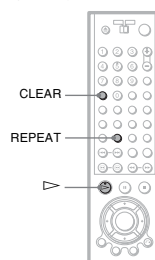
1 Press REPEAT during playback.
The following display appears.
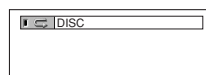
2 Press REPEAT repeatedly to select the item to be repeated.

◆ **When playing a DVD VIDEO**
• DISC: repeats all of the titles.
• TITLE: repeats the current title on a disc.
• CHAPTER: repeats the current chapter.

◆ **When playing a DVD-RW**
• DISC: repeats all the titles of the selected type.
• TITLE: repeats the current title on a disc.
• CHAPTER: repeats the current chapter.

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◆ **When playing a VIDEO CD, Super Audio CD, or CD**
• DISC: repeats all of the tracks.
• TRACK: repeats the current track.

◆ **When playing a DATA CD (MP3 audio)**
• DISC: repeats all of the albums.
• ALBUM: repeats the current album.
• TRACK: repeats the current track.

◆ **When Program Play or Shuffle Play is activated**
• ON: repeats Program Play or Shuffle Play.

To return to normal play
Press CLEAR, or select "OFF" in step 2.

✍ Hints
• You can set Repeat Play while the player is stopped. After selecting the "REPEAT" option, press ▷. Repeat Play starts.
• You can also select "REPEAT" from the Control Menu (page 13).

Repeating a specific portion (A-B Repeat Play) DVD-V DVD-RW VCD SA-CD CD

You can play a specific portion of a title, chapter or track repeatedly. (This function is useful when you want to memorize lyrics, etc.)
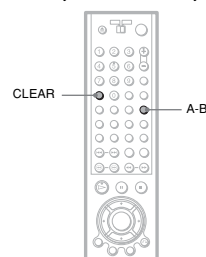
1 During playback, when you find the starting point (point A) of the portion to be played repeatedly, press A-B.
The starting point (point A) is set.

---
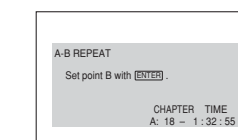
2 When you reach the ending point (point B), press A-B again.
The set points are displayed and the player starts repeating this specific portion.

To return to normal play
Press CLEAR.

✍ Hint
You can also select "A-B REPEAT" from the Control Menu (page 13).

Notes
• When you set A-B Repeat Play, the settings for Shuffle Play, Repeat Play, and Program Play are canceled.
• A-B Repeat Play does not work for titles containing still pictures on a DVD-RW in VR mode.
• A-B Repeat Play does not work across multiple titles on a DVD-RW in VR mode.

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Searching for a Scene

Searching for a Title/Chapter/Track/Index/Scene (Search mode) DVD-V DVD-RW VCD SA-CD CD DATA CD

You can search a DVD by title or chapter, and you can search a VIDEO CD/Super Audio CD/CD by track, index, or scene. As titles and tracks are assigned unique numbers on the disc, you can select the desired one by entering its number. Or, you can search for a scene using the time code.
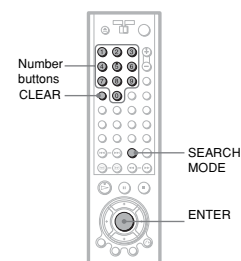
1 Press SEARCH MODE.
The following display appears.
"-- (∗∗)" appears next to the icon (∗∗ refers to a number).
The number in parentheses indicates the total number of titles, tracks, indexes, scenes, etc., of the disc.
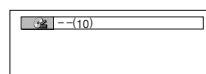
2 Press SEARCH MODE repeatedly to select the search method.

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◆ **When playing a DVD VIDEO/DVD-RW**
▫ TITLE
▫ CHAPTER
▫ TIME/TEXT
Select "TIME/TEXT" to search for a starting point by inputting the time code.

◆ **When playing a VIDEO CD**
▫ TRACK
▫ INDEX

◆ **When playing a VIDEO CD with PBC Playback**
▫ SCENE
▫ INDEX

◆ **When playing a Super Audio CD/CD**
▫ TRACK
▫ INDEX

◆ **When playing a DATA CD (MP3 audio)**
▫ ALBUM
▫ TRACK

3 Select the number of the title, track, scene, time code, etc. you want by pressing the number buttons to select the digit.

For example, to find the scene at 2 hours, 10 minutes, and 20 seconds after the beginning, select "TIME/TEXT" in step 2 and enter "21020."

If you make a mistake
Cancel the number by pressing CLEAR, then select another number.

4 Press ENTER.
The player starts playback from the selected number.

To turn off the display
Press SEARCH MODE repeatedly until the display is turned off.

✍ Hints
• You can display the first scene of titles, chapters or tracks recorded on the disc on a screen divided into 9 sections. You can start playback directly by selecting one of the scenes. For details, see page 49.
• You can also select "TITLE," "CHAPTER," "TRACK," "INDEX," "SCENE," "TIME/TEXT," or "ALBUM" from the Control Menu (page 13).

Searching by Scene
(PICTURE NAVIGATION)

You can divide the screen into 9 subscreens and find the desired scene quickly.

PICTURE NAVI

ENTER

←/↑/↓/→

⤺ RETURN
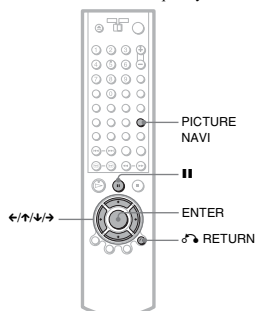
1 **Press PICTURE NAVI during playback.**

The following display appears.
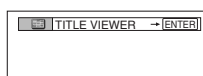
▭ TITLE VIEWER → ENTER

2 **Press PICTURE NAVI repeatedly to select the item.**

Refer to the explanations given for each item in the following sections.
• TITLE VIEWER (for DVD VIDEO only)
• CHAPTER VIEWER (for DVD VIDEO only)
• TRACK VIEWER (for VIDEO CD only)
• STROBE PLAYBACK (DVD VIDEO/ VIDEO CD only)
• ANGLE VIEWER (for DVD VIDEO only)

3 **Press ENTER.**

To return to normal play
Press ⤺ RETURN.

ᄒ **Hint**
You can also select "PICTURE NAVIGATION" from the Control Menu (page 13).

Notes
• The "PICTURE NAVIGATION" is not available when playing Super VCDs.
• Depending on the disc, you may not be able to select all functions.
• The sound is muted when using this function.

Scanning the title, chapter, or track (TITLE VIEWER, CHAPTER VIEWER, TRACK VIEWER)
DVD-V **VCD**

You can divide the screen into 9 subscreens and display the first scene of titles, chapters, or tracks.

You can also play back from the selected title, chapter, or track. After performing step 3 of "Searching by Scene (PICTURE NAVIGATION)" above, select the scene using ←/↑/↓/→ and press ENTER.

ᄒ **Hint**
If there are more than 9 titles, chapters, or tracks, ▼ is displayed at the bottom right.
To display the additional titles, chapters, or tracks, select the bottom right scene (the position 9) and press ↓. To return to the previous scene, select the top left scene (the position 1) and press ↑.

1	2	3
4	5	6
7	8	9 ▼

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Dividing a scene into 9 sections (STROBE PLAYBACK) **DVD-V** **VCD**

You can display 9 consecutive moving pictures on the screen.

When you press ❚❚ after performing step 3 of "Searching by Scene (PICTURE NAVIGATION)" above, the moving pictures pause.

Displaying different angles simultaneously (ANGLE VIEWER)
DVD-V

If various angles (multi-angles) for a scene are recorded on the DVD VIDEO, you can display all of the angles recorded on the disc on the screen divided into 9 sections.

You can also play back from the selected angle. After performing step 3 of "Searching by Scene (PICTURE NAVIGATION)" above, select the angle using ←/↑/↓/→ and press ENTER.

Checking the Playing Time and Remaining Time **DVD-V** **DVD-RW** **VCD** **SA-CD** **CD** **DATA CD**

You can check the playing time and remaining time of the current title, chapter, or track. Also, you can check the DVD/Super Audio CD/CD text or track name (MP3 audio) recorded on the disc.
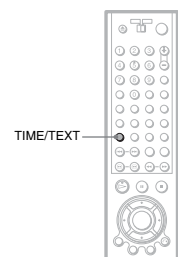
TIME/TEXT

1 **Press TIME/TEXT during playback.**

The following display appears.

⊙ T 1:01:57   PLAY ▶
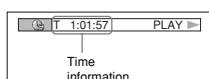
Time information

2 **Press TIME/TEXT repeatedly to change the time information.**

The display and the kinds of time that you can change depend on the disc you are playing.

◆ **When playing a DVD VIDEO or DVD-RW**
• T ∗:∗:∗ (hours: minutes: seconds)
Playing time of the current title
• T−∗:∗:∗
Remaining time of the current title
• C ∗:∗:∗
Playing time of the current chapter
• C−∗:∗:∗
Remaining time of the current chapter
◆ **When playing a VIDEO CD (with PBC functions)**
• ∗:∗ (minutes: seconds)
Playing time of the current scene
◆ **When playing a VIDEO CD (without PBC functions), Super Audio CD, or CD**
• T ∗:∗ (minutes: seconds)
Playing time of the current track
• T−∗:∗
Remaining time of the current track
• D ∗:∗
Playing time of the current disc
• D−∗:∗
Remaining time of the current disc
◆ **When playing a DATA CD (MP3 audio)**
• ∗:∗ (minutes: seconds)
Playing time of the current track
◆ **When playing a Super VCD**
• T−∗:∗ (minutes: seconds)
Playing time of the current track

To check the DVD/Super Audio CD/CD text or track and album names (MP3 audio)
Press TIME/TEXT repeatedly in step 2 to display text recorded on the DVD VIDEO/ Super Audio CD/CD/DATA CD.
The DVD/Super Audio CD/CD text appears only when text is recorded in the disc. You cannot change the text. If the disc does not contain text, "NO TEXT" appears.

BRAHMS SYMPHONY
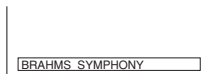
For DATA CDs, the track and album names of the MP3 audio track appears (page 54).

Checking the information on the front panel display

You can view the time information and text displayed on the TV screen also on the front panel display. The information on the front panel display changes as follows when you change the time information on your TV screen.

When playing a DVD VIDEO or DVD-RW
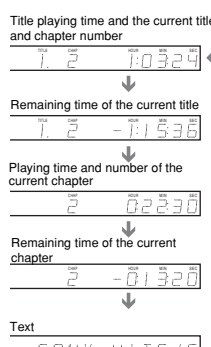
Title playing time and the current title and chapter number

1. 2   1:03:24
↓
Remaining time of the current title

1. 2   −1:15:36
↓
Playing time and number of the current chapter

2   0:22:30
↓
Remaining time of the current chapter

2   −0:13:20
↓
Text

SONY HITS/S

When playing a DATA CD (MP3 audio)

Track playing time and the current track and album number

10. 21   3:25
↓
Track name

01 HAPPY BIRT
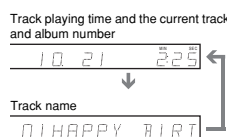
When playing a VIDEO CD (without PBC functions), Super Audio CD, or CD

Track playing time and the current track and index number

2. 1   2:25
↓
Remaining time of the current track

2. 1   −1:50
↓
Playing time of the disc

32:12
↓
Remaining time of the disc

−20:18
↓
Text

SONY HITS/S

ᄒ **Hints**
• When playing VIDEO CDs with PBC functions, the scene number and the playing time are displayed.
• Long text that does not fit in a single line will scroll across the front panel display.
• You can also check the time information and text using the Control Menu (page 13).

Notes
• Depending on the type of disc being played, the disc's text or track name may not be displayed.
• The player can only display the first level of the disc's text, such as the disc name or title.
• Playing time of MP3 audio tracks may not be displayed correctly.

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Checking the Play Information

You can check information such as the bit rate or the disc layer that is being played.

TIME/TEXT

↑/↓
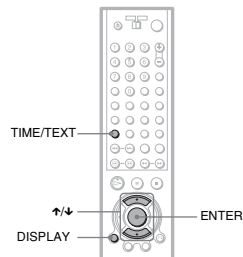
ENTER

DISPLAY

Checking the play information of a DVD (ADVANCED) `DVD-V` `DVD-RW`

1 **Press DISPLAY during playback.**
The Control Menu is displayed.

2 **Press ↑/↓ to select ▓▓▓ (ADVANCED), then press ENTER.**
The options for "ADVANCED" appear.

```
1 2 ( 2 7 )          PLAY   ▶
1 8 ( 3 4 )          DVD VIDEO
T   1 : 3 2 : 5 5

BIT RATE        BIT RATE
OFF                      384kbps
BIT RATE        ▓▓▓▓▓▓▓  Mbps
LAYER           0    5    10
```
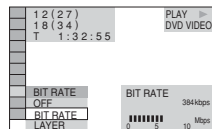
3 **Press ↑/↓ to select items.**
For each item, please refer to "Displays of each item."
• BIT RATE: displays the bit rate.
• LAYER: displays the layer and the pick-up point.

4 **Press ENTER.**

To turn off the ADVANCED window
Select "OFF" in step 3.

To turn off the Control Menu
Press DISPLAY repeatedly until the Control Menu is turned off.

Display of each item
By pressing DISPLAY repeatedly, you can display either "BIT RATE" or "LAYER," whichever was selected in "ADVANCED."

◆BIT RATE

BIT RATE — 384kbps — Audio
0 5 10 Mbps — Video
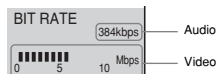
When playing MPEG audio sound tracks

BIT RATE
0 ▓▓▓▓▓▓ 10 1000 kbps — Audio
0   5   10 Mbps — Video
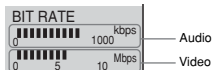
Bit rate refers to the amount of video/audio data per second in a disc. While playing a disc, an approximate bit rate of the playback picture is displayed as Mbps (Mega bit per second) and the audio as kbps (kilo bit per second). The higher the bit rate, the larger the amount of data. However, this does not always mean that you can get higher quality pictures or sounds.

◆LAYER

Appears when the DVD has dual layers
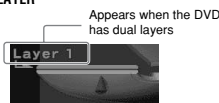
Layer 1

Indicates the approximate point where the disc is playing.
If it is a dual-layer DVD, the player indicates which layer is being read ("Layer 0" or "Layer 1").
For details on the layers, see page 87 (DVD VIDEO).

<div style="writing-mode: vertical">Viewing Information About the Disc</div>

→continued 53

Checking the play information of a DATA CD `DATA CD`

By pressing TIME/TEXT while playing MP3 audio tracks on a DATA CD, you can display the audio bit rate (the amount of data per second of the current audio).

Bit rate

T   17:30   128k   PLAY ▶

JAZZ
RIVER SIDE

Album name   Track name

54
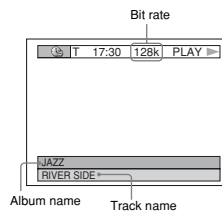
Sound Adjustments

Changing the Sound

`DVD-V` `DVD-RW` `VCD` `CD` `DATA CD`

When playing a DVD VIDEO recorded in multiple audio formats (PCM, Dolby Digital, MPEG Audio, or DTS), you can change the audio format. If the DVD VIDEO is recorded with multilingual tracks, you can also change the language.
With CDs, DATA CDs, or VIDEO CDs, you can select the sound from the right or left channel and listen to the sound of the selected channel through both the right and left speakers. For example, when playing a disc containing a song with the vocals on the right channel and the instruments on the left channel, you can hear the instruments from both speakers by selecting the left channel.

AUDIO

↑/↓
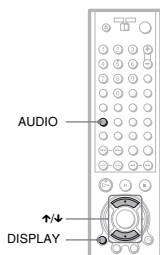
DISPLAY

1 **Press AUDIO during playback.**
The following display appears.

🎵 1:ENGLISH

---
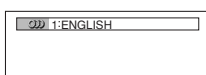
2 **Press AUDIO repeatedly to select the desired audio signal.**

◆ When playing a DVD VIDEO
Depending on the DVD VIDEO, the choice of language varies.
When 4 digits are displayed, they indicate a language code. Refer to "Language Code List" on page 91 to see which language the code represents.
When the same language is displayed two or more times, the DVD VIDEO is recorded in multiple audio formats.

◆ When playing a DVD-RW
The types of sound tracks recorded on a disc are displayed. The default setting is underlined.
Example:
• 1: MAIN (main sound)
• 1: SUB (sub sound)
• 1: MAIN+SUB (main and sub sound)

◆ When playing a VIDEO CD, CD, or DATA CD (MP3 audio)
The default setting is underlined.
• STEREO: The standard stereo sound
• 1/L: The sound of the left channel (monaural)
• 2/R: The sound of the right channel (monaural)

◆ When playing a Super VCD
The default setting is underlined.
• 1:STEREO: The stereo sound of the audio track 1
• 1:1/L: The sound of the left channel of the audio track 1 (monaural)
• 1:2/R: The sound of the right channel of the audio track 1 (monaural)
• 2:STEREO: The stereo sound of the audio track 2
• 2:1/L: The sound of the left channel of the audio track 2 (monaural)
• 2:2/R: The sound of the right channel of the audio track 2 (monaural)

🍃 Hint
You can also select "AUDIO" from the Control Menu (page 13).

<div style="writing-mode: vertical">Sound Adjustments</div>

→continued 55

Notes
• While playing a Super VCD on which the audio track 2 is not recorded, no sound will come out when you select "2:STEREO," "2:1/L" or "2:2/R."
• You cannot change the sound for Super Audio CDs.

Displaying the audio information of the disc `DVD-V`

Press DISPLAY during playback to display the Control Menu. Select "AUDIO" using ↑/↓. The channels being played are displayed on the screen.
For example, in Dolby Digital format, multiple signals ranging from monaural to 5.1 channel signals can be recorded on a DVD VIDEO. Depending on the DVD VIDEO, the number of the recorded channels may differ.

Current audio format*

```
1 2 ( 2 7 )          PLAY   ▶
1 8 ( 3 4 )          DVD VIDEO
T   1 : 3 2 : 5 5
1 : ENGLISH
                     PROGRAM FORMAT
                     DOLBY DIGITAL 3/2.1
          L   C   R
              LFE
          LS      RS
```

Currently playing program format**
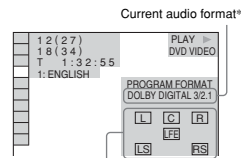
*"PCM," "MPEG," "DTS," or "DOLBY DIGITAL" is displayed.
In the case of "DOLBY DIGITAL," the channels in the playing track are displayed by numbers as follows:

For Dolby Digital 5.1 ch:

Rear component 2

DOLBY DIGITAL ③/②.①

Front component 2+   LFE (Low Frequency
Center component 1   Effect) component 1
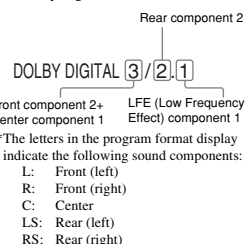
**The letters in the program format display indicate the following sound components:
  L: Front (left)
  R: Front (right)
  C: Center
  LS: Rear (left)
  RS: Rear (right)

  S: Rear (monaural): The rear component of the Dolby Surround processed signal and the Dolby Digital signal
  LFE: Low Frequency Effect signal

🍃 Hint
When playing Dolby Digital or DTS sound tracks, "LFE" is enclosed in a dotted line when the LFE signal is not being output.

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1-13

SURROUND Mode Settings [DVD-V] [DVD-RW] [VCD] [CD] [DATA CD]

You can enjoy surround sounds while playing discs including Dolby Digital, DTS, and MPEG audio DVDs, even if you have only 2 or 4 speakers. Select the surround mode that best suits your speaker setup.

SUR
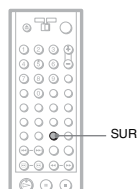
1 Press SUR during playback.

The following display appears.
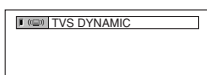
| ▣ ((□)) TVS DYNAMIC |

2 Press SUR repeatedly to select one of the surround modes.

Refer to the following explanations given for each item.

◆ **For 2 speaker setups**
• TVS DYNAMIC
• TVS WIDE
• TVS NIGHT
• TVS STANDARD

◆ **For 4 to 6 speaker setups**
(If you select "NONE" in the setting of "REAR" in "SPEAKER SETUP"(page 81), you cannot select these modes.)
• NORMAL SURROUND
• ENHANCED SURROUND
• VIRTUAL REAR SHIFT
• VIRTUAL MULTI REAR
• VIRTUAL MULTI DIMENSION

To cancel the setting
Select "OFF" in step 2.

For 2 speaker setups

When you connect a stereo TV or 2 front speakers, TVS (TV Virtual Surround) lets you enjoy surround sound effects by using sound imaging to create virtual rear speakers from the sound of the front speakers (L: left, R: right) without using actual rear speakers.

If the player is set up to output the signal from the DIGITAL OUT (OPTICAL or COAXIAL) jack, the surround effect will be heard only when "DOLBY DIGITAL" and "DTS" are set to "D-PCM" and "MPEG" is set to "PCM" (DVP-NS915V only) in "AUDIO SETUP"(page 79).

◆ **TVS DYNAMIC**
Creates one set of virtual rear speakers from the sound of the actual front speakers (L, R) as shown below.
This mode is effective when the distance between the front L and R speakers is short, such as with built-in speakers on a stereo TV.

◆ **TVS WIDE**
Creates five sets of virtual rear speakers from the sound of the actual front speakers (L, R) as shown below.
This mode is effective when the distance between the front L and R speakers is short, such as with built-in speakers on a stereo TV.

◆**TVS NIGHT**
Large sounds, such as explosions, are suppressed, but the quieter sounds are unaffected. This feature is useful when you want to hear the dialog and enjoy the surround sound effects of "TVS WIDE" at low volume.

◆**TVS STANDARD**
Creates three sets of virtual rear speakers from the sound of the actual front speakers (L, R) as shown below. This mode is effective when you use 2 separate front speakers.
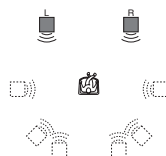
| L: Front speaker (left) |
| R: Front speaker (right) |
| □: Virtual speaker |

For 4 to 6 speaker setups

You can enjoy the following surround effects by using the 2 front speakers and 2 rear speakers.
Connect the player to the amplifier (receiver) with the D-1 connection (page 27).
You can experience Dolby Surround (Pro Logic) sounds or Digital Cinema Sound (DCS). DCS uses sound imaging to shift the sound of the rear speakers away from the actual speaker position or create entire sets of virtual rear speakers from one set of actual rear speakers. "VIRTUAL REAR SHIFT," "VIRTUAL MULTI REAR," and "VIRTUAL MULTI DIMENSION" make use of this technology.

◆**NORMAL SURROUND**
Software with 2 channel audio signals is decoded with the Dolby Surround (Pro Logic) decoder to create surround effects. The rear speakers will emit identical monaural sounds. If you are using a center speaker, the appropriate sounds for the center speaker will be delivered.

◆**ENHANCED SURROUND**
Provides a greater sense of presence from a Dolby Surround (Pro Logic) source with a monaural rear channel signal. Produces a stereo like effect in the rear channels.

◆**VIRTUAL REAR SHIFT**
Shifts the sound of the rear speakers away from the actual speaker position.
The shift position differs according to "REAR" or "SIDE" setting of the rear speakers (page 81).

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Sound Adjustments
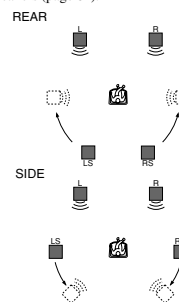
◆**VIRTUAL MULTI REAR**
Creates an array of virtual rear speakers from a single set of actual rear speakers.
The position of the virtual rear speakers differs according to "REAR" or "SIDE" setting of the rear speakers (page 81).
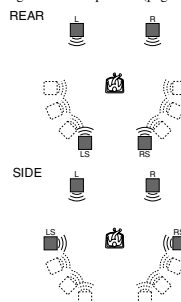
◆**VIRTUAL MULTI DIMENSION**
Creates an array of virtual rear speaker positions higher than the listener from a single set of actual rear speakers.
This mode creates five sets of virtual speakers surrounding the listener at approximately a 30° angle of elevation. The effect differs according to "REAR" or "SIDE" setting of the rear speakers (page 81).
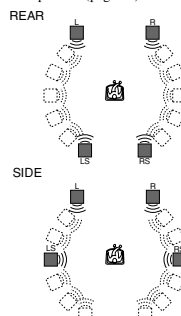
| L: Front speaker (left) |
| R: Front speaker (right) |
| LS: Rear speaker (left) |
| RS: Rear speaker (right) |
| □: Virtual speaker |

◌̈ Hints
• You can select "SURROUND" by pressing the SURROUND button on the player.
• You can also select "SURROUND" from the Control Menu (page 13).

Notes
• To enjoy the multichannel audio through the 5.1CH OUTPUT jacks, correctly set each speaker position and distance (page 81).
• When the playing signal does not contain a signal for the rear speakers, it may be difficult to hear the surround effect.
• When you select one of the TVS modes, the player does not output the sound of center speaker.
• When you select one of the surround modes, turn off the surround setting of the connected TV or amplifier (receiver).
• Make sure that your listening position is between and at an equal distance from your speakers, and that the speakers are located in similar surroundings.
• "TVS NIGHT" only works with Dolby Digital discs. However, not all discs will respond to the "TVS NIGHT" function in the same way.
• If you use the DIGITAL OUT (OPTICAL or COAXIAL) jack and set "DOLBY DIGITAL" to "DOLBY DIGITAL," "DTS" to "DTS," and "MPEG" to "MPEG" in "AUDIO SETUP", sound will come from your speakers but it will not have the SURROUND effect.
• If the player is set up to output the signal from the DIGITAL OUT (OPTICAL or COAXIAL) jack, the TVS effect will not be heard when you play a CD.

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Sound Adjustments

Changing the Angles [DVD-V]

If various angles (multi-angles) for a scene are recorded on the DVD VIDEO, "ANGLE" appears in the front panel display. This means that you can change the viewing angle.
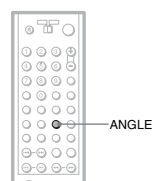
ANGLE

1 Press ANGLE during playback.

The number of the angle appears on the display.

| ▣ 📷 2 |

2 Press ANGLE repeatedly to select the angle number.

The scene changes to the selected angle.

◌̈ Hints
• You can display all the angles recorded on the disc on the same screen, and start playback directly from the chosen angle. The angles are displayed on a screen divided into 9 sections (page 50).
• You can also select "ANGLE" from the Control Menu (page 13).

Note
Depending on the DVD VIDEO, you may not be able to change the angles even if multi-angles are recorded on the DVD VIDEO.

Displaying the Subtitles [DVD-V] [DVD-RW]

If subtitles are recorded on the discs, you can change the subtitles or turn them on and off whenever you want while playing a DVD.
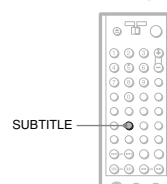
SUBTITLE

1 Press SUBTITLE during playback.

The following display appears.

| ▣ 1:ENGLISH |
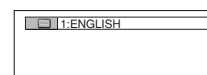
2 Press SUBTITLE repeatedly to select the setting.

◆ **When playing a DVD VIDEO**
Select the language.
Depending on the DVD VIDEO, the choice of language varies.
When 4 digits are displayed, they indicate a language code. Refer to "Language Code List" on page 91 to see which language the code represents.

◆ **When playing a DVD-RW**
Select "ON."

To turn off the subtitles
Select "OFF" in step 2.

◌̈ Hint
You can also select "SUBTITLE" from the Control Menu (page 13).

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1-14

Adjusting the Picture Quality (BNR) `DVD-V` `DVD-RW` `VCD`

The Block Noise Reduction (BNR) function adjusts the picture quality by reducing the "block noise" or mosaic like patterns that appear on your TV screen.

↑/↓
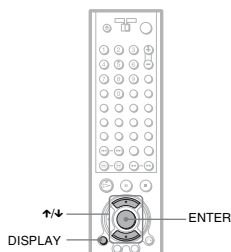
DISPLAY — ENTER

Enjoying Movies

1 Press DISPLAY twice during playback.

The Control Menu appears.

2 Press ↑/↓ to select [BNR] (BNR), then press ENTER.

The options for "BNR" appear.

```
12(27)        PLAY    ▶
18(34)        DVD VIDEO
T  1:32:55
OFF
1
2
3
OFF
```
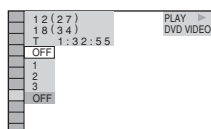
3 Press ↑/↓ to select a level.

- 1: reduces the "block noise."
- 2: reduces the "block noise" more than 1.
- 3: reduces the "block noise" more than 2.

---

4 Press ENTER.

The disc plays with the setting you selected.

To cancel the "BNR" setting
Select "OFF" in step 3.

To turn off the Control Menu
Press DISPLAY repeatedly until the Control Menu is turned off.

Notes

- If the outlines of the images on your screen should become blurred, set "BNR" to "OFF."
- Depending on the disc or the scene being played, the "BNR" effect may be hard to discern.

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Adjusting the Playback Picture (CUSTOM PICTURE MODE) `DVD-V` `DVD-RW` `VCD`

You can adjust the video signal of the DVD or VIDEO CD from the player to obtain the picture quality you want. Choose the setting that best suits the program you are watching. When you select "MEMORY," you can make further adjustments to each element of the picture (color, brightness, etc.).

PICTURE MODE

←/↑/↓/→ — ENTER
RETURN
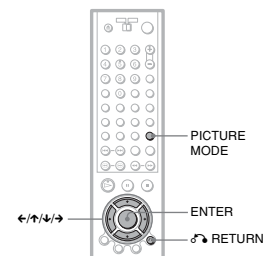
1 Press PICTURE MODE during playback.

The following display appears.

```
[  ]  DYNAMIC 1
```
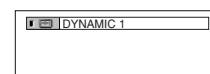
2 Press PICTURE MODE repeatedly to select the setting you want.

The default setting is underlined.
- STANDARD: displays a standard picture.
- DYNAMIC 1: produces a bold dynamic picture by increasing the picture contrast and the color intensity.
- DYNAMIC 2: produces a more dynamic picture than DYNAMIC 1 by further increasing the picture contrast and the color intensity.

- CINEMA 1: enhances details in dark areas by increasing the black level.
- CINEMA 2: White colors become brighter and black colors become richer, and the color contrast is increased.
- MEMORY: adjusts the picture in greater detail.

Hints
- When you watch a movie, "CINEMA 1" or "CINEMA 2" is recommended.
- The picture can be adjusted by pressing the PICTURE MODE button on the player as well.
- You can also select "CUSTOM PICTURE MODE" from the Control Menu (page 13).

Adjusting the picture items in "MEMORY"

You can adjust each element of the picture individually.
- PICTURE: changes the contrast
- BRIGHTNESS: changes the overall brightness
- COLOR: makes the colors deeper or lighter
- HUE: changes the color balance

1 Press PICTURE MODE repeatedly to select "MEMORY" and press ENTER.

The "PICTURE" adjustment bar appears.

```
PICTURE ───────────  0
```

2 Press ←/→ to adjust the picture contrast, then press ENTER.

The adjustment is saved, and "BRIGHTNESS" adjustment bar appears.

3 Repeat step 2 to adjust "BRIGHTNESS," "COLOR," and "HUE."

The Custom Picture Mode display appears. You can check each adjustment.

```
PICTURE        ▼    +1
BRIGHTNESS     ▼    −3
COLOR          ▼    +3
HUE            ▼    −1
RETURN      RESET
```

To turn off the display
Press RETURN , or select "RETURN" in step 3 and press ENTER.

Hints
- To reset the picture items to the default values, press → after step 3 to select "RESET" and press ENTER.
- When "PLAYBACK MEMORY" in "CUSTOM SETUP" is set to "ON" the player will save a single setting for up to 40 individual discs. (This does not apply to DVD-RWs in VR mode.)
- If you do not want to save the adjustment in step 2, you can go to the next picture item by pressing ↑/↓ without saving.

Enjoying Movies

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Enhancing the Playback Picture (DIGITAL VIDEO ENHANCER) `DVD-V` `DVD-RW` `VCD`

The Digital Video Enhancer (DVE) function makes the picture appear clear and crisp by enhancing the outlines of images on your TV screen. Also, this function can soften the images on the screen.
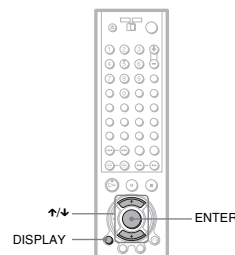
↑/↓ — ENTER

DISPLAY

1 Press DISPLAY twice during playback.

The Control Menu appears.

2 Press ↑/↓ to select [ ] (DIGITAL VIDEO ENHANCER), then press ENTER.

The options for "DIGITAL VIDEO ENHANCER" appear.

```
12(27)        PLAY    ▶
18(34)        DVD VIDEO
T  1:32:55
OFF
1
2
3
SOFT
OFF
```

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---
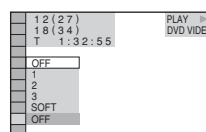
3 Press ↑/↓ to select a level.

- 1: enhances the outline.
- 2: enhances the outline more than 1.
- 3: enhances the outline more than 2.
- SOFT: softens the image (DVD only).

4 Press ENTER.

The disc plays with the setting you selected.

To cancel the "DIGITAL VIDEO ENHANCER" setting
Select "OFF" in step 3.

To turn off the Control Menu
Press DISPLAY repeatedly until the Control Menu is turned off.

Note

Depending on the disc or the scene being played, noise found in the disc may become more apparent. If this happens, it is recommended that you use the BNR function (page 61) with the DVE function. If the condition still does not improve, reduce the Digital Video Enhancer level, or select "SOFT" (DVD only) in step 3 above.

Locking Discs (CUSTOM PARENTAL CONTROL, PARENTAL CONTROL)

You can set two kinds of playback restrictions for the desired disc.
• Custom Parental Control
You can set playback restrictions so that the player will not play inappropriate discs.
• Parental Control
Playback of some DVD VIDEOs can be limited according to a predetermined level such as the age of the users. Scenes may be blocked or replaced with different scenes.
The same password is used for both Parental Control and Custom Parental Control.

Custom Parental Control `DVD-V`
`VCD` `SA-CD` `CD`

You can set the same Custom Parental Control password for up to 40 discs. When you set the 41st-disc, the first disc is canceled.

Number buttons

■

↑/↓
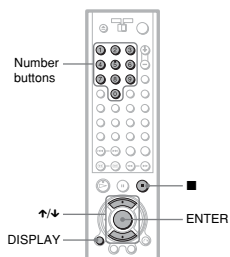
ENTER

DISPLAY

1 Insert the disc you want to lock.
If the disc is playing, press ■ to stop playback.

2 Press DISPLAY while the player is in stop mode.
The Control Menu appears.

3 Press ↑/↓ to select (PARENTAL CONTROL), then press ENTER.
The options for "PARENTAL CONTROL" appear.

```
12(27)              STOP ■
18(34)              DVD VIDEO
T  1:32:55

ON →
PLAYER →
PASSWORD →
OFF
```
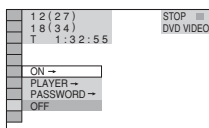
4 Press ↑/↓ to select "ON →," then press ENTER.

◆ **If you have not entered a password**
The display for registering a new password appears.

```
PARENTAL CONTROL

Enter a new 4-digit password, then
press ENTER.

■   ■   ■   ■
```

Enter a 4-digit password using the number buttons, then press ENTER.
The display for confirming the password appears.

◆ **When you have already registered a password**
The display for entering the password appears.

```
PARENTAL CONTROL

Enter password, then press ENTER.

■   ■   ■   ■
```
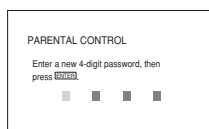
5 Enter or re-enter your 4-digit password using the number buttons, then press ENTER.
"Custom parental control is set." appears and then the screen returns to the Control Menu.

To turn off the Custom Parental Control function

1 Follow steps 1 through 3 of "Custom Parental Control."

2 Press ↑/↓ to select "OFF →," then press ENTER.

3 Enter your 4-digit password using the number buttons, then press ENTER.

To play a disc for which Custom Parental Control is set

1 Insert the disc for which Custom Parental Control is set.
The "CUSTOM PARENTAL CONTROL" display appears.

```
CUSTOM PARENTAL CONTROL

Custom parental control is already
set. To play, enter your password
and press ENTER.

■   ■   ■   ■
```
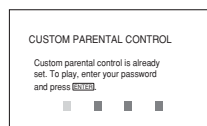
2 Enter your 4-digit password using the number buttons, then press ENTER.
The player is ready for playback.

✑ Hint
If you forget your password, enter the 6-digit number "199703" using the number buttons when the "CUSTOM PARENTAL CONTROL" display asks you for your password, then press ENTER. The display will ask you to enter a new 4-digit password.

Parental Control (limited playback) `DVD-V`

Playback of some DVD VIDEOs can be limited according to a predetermined level such as the age of the users. The "PARENTAL CONTROL" function allows you to set a playback limitation level.
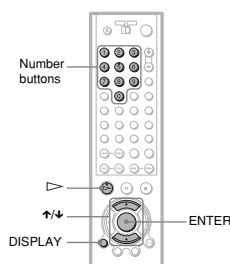
66

Number buttons

▷

↑/↓

ENTER

DISPLAY

1 Press DISPLAY while the player is in stop mode.
The Control Menu appears.

2 Press ↑/↓ to select (PARENTAL CONTROL), then press ENTER.
The options for "PARENTAL CONTROL" appear.

```
12(27)              STOP ■
18(34)              DVD VIDEO
T  1:32:55

ON →
PLAYER →
PASSWORD →
OFF
```
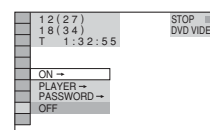
3 Press ↑/↓ to select "PLAYER →," then press ENTER.

◆ **If you have not entered a password**
The display for registering a new password appears.

```
PARENTAL CONTROL

Enter a new 4-digit password, then
press ENTER.

■   ■   ■   ■
```

Enter a 4-digit password using the number buttons, then press ENTER.
The display for confirming the password appears.

◆ **When you have already registered a password**
The display for entering the password appears.

```
PARENTAL CONTROL

Enter password, then press ENTER.

■   ■   ■   ■
```
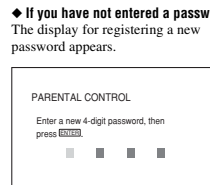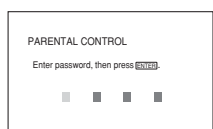
4 Enter or re-enter your 4-digit password using the number buttons, then press ENTER.
The display for setting the playback limitation level appears.

```
PARENTAL CONTROL
LEVEL:              OFF
STANDARD:           USA
```
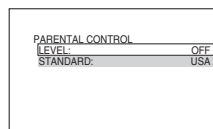
5 Press ↑/↓ to select "STANDARD," then press ENTER.
The selection items for "STANDARD" are displayed.

```
PARENTAL CONTROL
LEVEL:              OFF
STANDARD:           USA
                    USA
                    OTHERS→
```
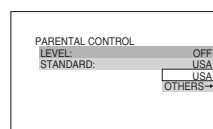
6 Press ↑/↓ to select a geographic area as the playback limitation level, then press ENTER.
The area is selected.
When you select "OTHERS →," select and enter a standard code in the table on page 68 using the number buttons.

7 Press ↑/↓ to select "LEVEL," then press ENTER.
The selection items for "LEVEL" are displayed.

```
PARENTAL CONTROL
LEVEL:              OFF
STANDARD:           OFF

                    8:
                    7:  NC17
                    6:  R
                    5:  ▼
```
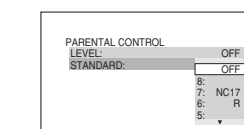
8 Select the level you want using ↑/↓, then press ENTER.
Parental Control setting is complete.

```
PARENTAL CONTROL
LEVEL:              4:  PG13
STANDARD:           USA
```
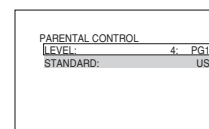
The lower the value, the stricter the limitation.

To turn off the Parental Control function
Set "LEVEL" to "OFF" in step 8.

To play a disc for which Parental Control is set

1 Insert the disc and press ▷.
The display for entering your password appears.

2 Enter your 4-digit password using the number buttons, then press ENTER.
The player starts playback.

✑ Hint
If you forget your password, remove the disc and repeat steps 1 to 3 of "Parental Control (limited playback)." When you are asked to enter your password, enter "199703" using the number buttons, then press ENTER. The display will ask you to enter a new 4-digit password. After you enter a new 4-digit password, replace the disc in the player and press ▷. When the display for entering your password appears, enter your new password.

Notes
• When you play discs which do not have the Parental Control function, playback cannot be limited on this player.

• Depending on the disc, you may be asked to change the parental control level while playing the disc. In this case, enter your password, then change the level. If the Resume Play mode is canceled, the level returns to the previous level.

Area Code

Standard	Code number
Argentina	2044
Australia	2047
Austria	2046
Belgium	2057
Brazil	2070
Canada	2079
Chile	2090
China	2092
Denmark	2115
Finland	2165
France	2174
Germany	2109
India	2248
Indonesia	2238
Italy	2254
Japan	2276
Korea	2304
Malaysia	2363
Mexico	2362
Netherlands	2376
New Zealand	2390
Norway	2379
Pakistan	2427
Philippines	2424
Portugal	2436
Russia	2489
Singapore	2501
Spain	2149
Sweden	2499
Switzerland	2086
Thailand	2528
United Kingdom	2184

Changing the password

1 Press DISPLAY while the player is in stop mode.
The Control Menu appears.

2 Press ↑/↓ to select (PARENTAL CONTROL), then press ENTER.
The options for "PARENTAL CONTROL" appear.

3 Press ↑/↓ to select "PASSWORD →," then press ENTER.
The display for entering the password appears.

4 Enter your 4-digit password using the number buttons, then press ENTER.

5 Enter a new 4-digit password using the number buttons, then press ENTER.

6 To confirm your password, re-enter it using the number buttons, then press ENTER.

If you make a mistake entering your password
Press ⬅ before you press ENTER and input the correct number.

If you make a mistake
Press ⟲ RETURN.

To turn off the display
Press DISPLAY repeatedly until the display is turned off.

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1-16

Operation Sound Effects

(Sound Feedback)

The player beeps when the following operations are performed.
The default setting of the Sound Feedback function is set to off.

Operation	Operation sound
Power is turned on	One beep
Power is turned off	Two beeps
▷ is pressed	One beep
❚❚ is pressed	Two beeps
Playback is stopped	One long beep
Operation is not possible	Three beeps

Setting Sound Feedback
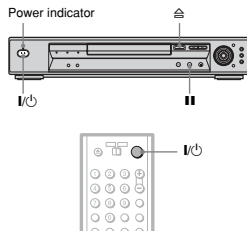
1 **Press I/⏻ on the player or the remote.**
The power indicator lights up in green.
When there is a disc in the player, press ⏏ and remove the disc. Then press ⏏ again to close the disc tray.

2 **Press and hold ❚❚ on the player for more than two seconds.**
You will hear one beep and the Sound Feedback function is turned on.

To turn off the Sound Feedback function
When there is no disc in the player, press and hold ❚❚ on the player for more than two seconds. You will hear two beeps and the Sound Feedback function is turned off.

Controlling Your TV or AV Amplifier (Receiver) With the Supplied Remote

By adjusting the remote signal, you can control your TV with the supplied remote.
If you connect the player to an AV amplifier (receiver), you can control the volume with the supplied remote.

Notes

- Depending on the connected unit, you may not be able to correctly control your TV or AV amplifier (receiver) using some of the buttons below.
- If you enter a new code number, the code number previously entered will be erased.
- When you replace the batteries of the remote, the code number you have set may be reset to the default setting. Set the appropriate code number again.

Controlling TVs with the remote
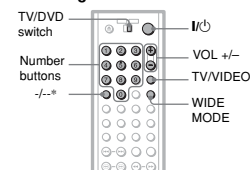
* DVP-NS915V only

1 **Slide the TV/DVD switch to TV.**

2 **Hold down I/⏻, and enter your TV's manufacturer code (see "Code numbers of controllable TV's" below) using the number buttons.**

---

3 **Release I/⏻.**
When the TV/DVD switch is set to TV, the remote performs the following:

I/⏻	Turns the TV on or off
VOL +/–	Adjusts the volume of the TV
For DVP-NS755V: WIDE MODE	Switches to or from the wide mode of a Sony wide TV
For DVP-NS915V: WIDE MODE	Switches to or from the wide mode of a wide TV
TV/VIDEO	Switches the TV's input source between the TV and other input sources. The button works even if the TV/DVD switch is set to DVD
For DVP-NS755V: Number buttons and ENTER	Selects the channel of the TV
For DVP-NS915V: Number buttons and -/--*	Selects the channel of a Sony TV

* When you use the number buttons to select the TV's channel, press -/-- followed by the number buttons for two-digit numbers.

Code numbers of controllable TVs

If more than one code number is listed, try entering them one at a time until you find the one that works with your TV.

◆DVP-NS755V

Manufacturer	Code number
Sony (default)	01
Akai	04
AOC	04
Centurion	12
Coronado	03
Curtis-Mathes	12
Daytron	12
Emerson	03,04,14
Fisher	11
General Electric	06,10
Gold Star	03,04,17
Hitachi	02,03
J.C.Penney	04,12
JVC	09
KMC	03
Magnavox	03,08,12
Marantz	04,13
MGA/Mitsubishi	04,12,13,17
NEC	04,12
Panasonic	06,19
Philco	03,04
Philips	08,21
Pioneer	16
Portland	03
Proscan	10
Quasar	06,18
Radio Shack	05,14
RCA	04,10
Sampo	12
Samsung	03,12,20
Sanyo	11,14
Scott	12
Sears	07,10,11

Manufacturer	Code number
Sharp	03,05,18
Sylvania	08,12
Teknika	03,08,14
Toshiba	07
Wards	03,04,12
Yorx	12
Zenith	15

◆DVP-NS915V

Manufacturer	Code number
Sony	01(default), 03, 04
Aiwa	32
Akai	68
Blaupunkt	10, 21
Grundig	10, 11
Hitachi	24
LG	06
JVC	33
Loewe	45
Mitsubishi	27, 28, 50
Mivar	09
NEC	66
Nokia	15, 16, 69
Orion	47, 48
Panasonic	17, 49
Philips	06, 07, 08
Pioneer	26
Saba	12, 13
Samsung	22, 23
Sanyo	25
Sharp	29
Siemens	39
TEAC	67
Telefunken	36
Thomson	43
Toshiba	38

Controlling the volume of your AV amplifier (receiver) with the remote
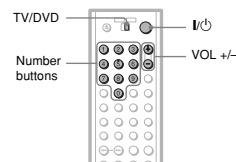
1 **Slide the TV/DVD switch to DVD.**

2 **Hold down I/⏻, and enter your AV amplifier (receiver)'s manufacturer's code (see the table below) using the number buttons.**

3 **Release I/⏻.**
The VOL +/– buttons control the AV amplifier's volume.

◆ **If you want to control the TV's volume**
Slide the TV/DVD switch to TV.

Code numbers of controllable AV amplifiers (receivers)

If more than one code number is listed, try entering them one at a time until you find the one that works with your AV amplifier (receiver).

Manufacturer	Code number
Sony	80, 88, 89, 91
Denon	84, 85, 86
Kenwood	92, 93
Onkyo	81, 82, 83
Pioneer	99
Sansui	87
Technics	97, 98
Yamaha	94, 95, 96

Hint

If you want to control the TV's volume even when the TV/DVD switch is set to DVD, repeat steps 1 and 2 and enter the code number 90 (default).

Using the Setup Display

By using the Setup Display, you can make various adjustments to items such as picture and sound. You can also set a language for the subtitles and the Setup Display, among other things. For details on each Setup Display item, see pages from 74 to 83.

The on-screen displays and available options differ depending on the player model. Note the differences indicated in the text, for example, "DVP-NS755V only."

Note

Playback settings stored in the disc take priority over the Setup Display settings and not all the functions described may work.
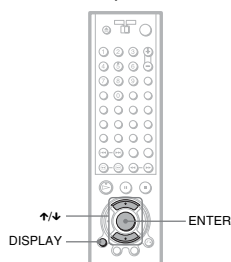
1 Press DISPLAY when the player is in stop mode.

The Control Menu appears.

2 Press ↑/↓ to select ⎚ (SETUP), then press ENTER.

The options for "SETUP" appear.
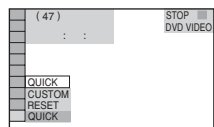
3 Press ↑/↓ to select "CUSTOM," then press ENTER.

The Setup Display appears.
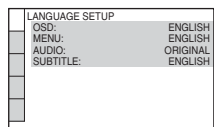
4 Press ↑/↓ to select the setup item from the displayed list: "LANGUAGE SETUP," "SCREEN SETUP," "CUSTOM SETUP," "AUDIO SETUP," or "SPEAKER SETUP." Then press ENTER.

The Setup item is selected.
Example: "SCREEN SETUP"

Selected item

Setup items
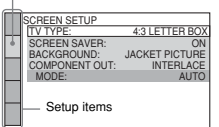
5 Select an item using ↑/↓, then press ENTER.

The options for the selected item appear.
Example: "TV TYPE"
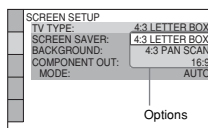
Options

6 Select a setting using ↑/↓, then press ENTER.

The setting is selected and setup is complete.
Example: "16:9"
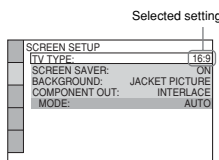
Selected setting

To turn off the display

Press DISPLAY repeatedly until the display is turned off.

To enter the Quick Setup mode

Select "QUICK" in step 3. Follow from step 5 of the Quick Setup explanation to make basic adjustments (page 29).

To reset all the "SETUP" settings

1 Select "RESET" in step 3 and press ENTER.

2 Select "YES" using ↑/↓.
You can also quit the process and return to the Control Menu by selecting "NO" here.

3 Press ENTER.
All the settings explained on pages 74 to 83 return to the default settings. Do not press I/⏻ while resetting the player, which takes a few seconds to complete.

Setting the Display or Sound Track Language
(LANGUAGE SETUP)

"LANGUAGE SETUP" allows you to set various languages for the on-screen display or sound track.

Select "LANGUAGE SETUP" in the Setup Display. To use the display, see "Using the Setup Display" (page 73).
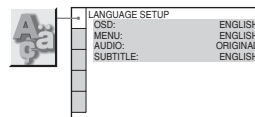
◆ **OSD (On-Screen Display)**
Switches the display language on the screen.

◆ **MENU (DVD VIDEO only)**
You can select the desired language for the disc's menu.

◆ **AUDIO (DVD VIDEO only)**
Switches the language of the sound track.
When you select "ORIGINAL," the language given priority in the disc is selected.

◆ **SUBTITLE (DVD VIDEO only)**
Switches the language of the subtitle recorded on the DVD VIDEO.
When you select "AUDIO FOLLOW," the language for the subtitles changes according to the language you selected for the sound track.

☼ **Hint**
If you select "OTHERS →" in "MENU," "SUBTITLE," or "AUDIO," select and enter a language code from "Language Code List" on page 91 using the number buttons.

Note
When you select a language in "MENU," "SUBTITLE," or "AUDIO" that is not recorded on a DVD VIDEO, one of the recorded languages will be automatically selected.

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Settings for the Display
(SCREEN SETUP)

Choose settings according to the TV to be connected.

Select "SCREEN SETUP" in the Setup Display. To use the display, see "Using the Setup Display" (page 73).
The default settings are underlined.
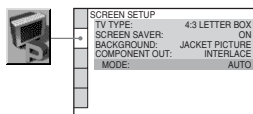
◆ **TV TYPE**
Selects the aspect ratio of the connected TV (4:3 standard or wide).

4:3 LETTER BOX	Select this when you connect a 4:3 screen TV. Displays a wide picture with bands on the upper and lower portions of the screen.
4:3 PAN SCAN	Select this when you connect a 4:3 screen TV. Automatically displays a wide picture on the entire screen and cuts off the portions that do not fit.
16:9*	Select this when you connect a wide-screen TV or a TV with a wide mode function.

* 16:9 is the default setting for DVP-NS915V.

4:3 LETTER BOX

4:3 PAN SCAN

16:9

Note
Depending on the DVD, "4:3 LETTER BOX" may be selected automatically instead of "4:3 PAN SCAN" or vice versa.

◆ **COLOR SYSTEM (VIDEO CD only) (DVP-NS915V only)**
Selects the color system when you play a VIDEO CD.

AUTO	Outputs the video signal in the system of the VIDEO CD, either PAL or NTSC. If your TV is the DUAL system, select AUTO.
PAL	Changes the video signals of an NTSC VIDEO CD and outputs it in the PAL system.
NTSC	Changes the video signals of a PAL VIDEO CD and outputs it in the NTSC system.

Notes
• You cannot change the color system for DVDs.
• You can change the color system of this player according to the connected TV. See page 17.

◆ **SCREEN SAVER**
The screen saver image appears when you leave the player in pause or stop mode for 15 minutes, or when you play back a Super Audio CD, CD, or DATA CD (MP3 audio) for more than 15 minutes. The screen saver will help prevent your display device from becoming damaged (ghosting). Press ▷ to turn off the screen saver.

ON	Turns on the screen saver.
OFF	Turns off the screen saver.

◆ **BACKGROUND**
Selects the background color or picture on the TV screen in stop mode or while playing a Super Audio CD, CD, or DATA CD (MP3 audio).

JACKET PICTURE	The jacket picture (still picture) appears, but only when the jacket picture is already recorded on the disc (CD-EXTRA, etc.). If the disc does not contain a jacket picture, the "GRAPHICS" picture appears.
GRAPHICS	A preset picture stored in the player appears.
BLUE	The background color is blue.
BLACK	The background color is black.

◆ **COMPONENT OUT**
This will change the type of signal output from the COMPONENT VIDEO OUT jacks on the player. See page 88 for more information about the different types.

INTERLACE	Select this when you are connected to a standard (interlace format) TV.
PROGRESSIVE	Select this when you have a TV that can accept progressive signals.

☼ **Hint**
When the player outputs progressive signals, the PROGRESSIVE indicator lights up.

Note
If you select "PROGRESSIVE" when you connect the player to a TV that cannot accept the signal in progressive format 480p (525p), the image quality will deteriorate. In this case, set the COMPONENT VIDEO OUT/SCAN SELECT switch on the back panel of the player to INTERLACE. Then set "COMPONENT OUT" to "INTERLACE" when you can see the TV screen correctly, and reset the COMPONENT VIDEO OUT/SCAN SELECT switch to SELECTABLE.

When "PROGRESSIVE" is selected in "COMPONENT OUT"

You can fine-tune the Progressive 480p (525p)* video signal output when you select "PROGRESSIVE" in "COMPONENT OUT" of the "SCREEN SETUP" display and connect the player to the TV that is able to accept the video signal in progressive format.

* The active number of progressive scan lines is 480, and the measured number of lines is 525.

◆ **MODE (Conversion Modes)**
DVD software can be divided into two types: film based software and video based software. Video based software is derived from TV, such as dramas and sit-coms, and displays images at 30 frames/60 fields per second. Film based software is derived from film and displays images at 24 frames per second. Some DVD software contains both Video and Film.
In order for these images to appear natural on your screen when output in PROGRESSIVE mode (60 frames per second), the progressive video signal needs to be converted to match the type of DVD software that you are watching.

AUTO	This will automatically detect if you are playing Film based or Video based software and convert the signal to the appropriate conversion mode. Normally select this position.
VIDEO	This will set the conversion mode for Video based software, regardless of the type of software that you are playing.

Note
When you play video based software with progressive signals, sections of some types of images may appear unnatural due to the conversion process when output through the COMPONENT VIDEO OUT jacks. Images from the S VIDEO OUT 1/2 and LINE OUT (VIDEO) 1/2 jacks are unaffected as they are output in the interlace format.

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Custom Settings (CUSTOM SETUP)

Use this to set up playback related and other settings.

Select "CUSTOM SETUP" in the Setup Display. To use the display, see "Using the Setup Display" (page 73).
The default settings are underlined.

```
CUSTOM SETUP
AUTO POWER OFF:       OFF
AUTO PLAY:            OFF
DIMMER:               BRIGHT
PAUSE MODE:           AUTO
PLAYBACK MEMORY:      ON
TRACK SELECTION:      OFF
MULTI-DISC RESUME:    ON
CD DIRECT:            OFF
```

◆ AUTO POWER OFF (DVP-NS755V only)
Switches the Auto Power Off setting on or off. For DVP-NS915V, the AUTO POWER OFF function is fixed to "ON".

OFF	Switches this function off.
ON	The player enters standby mode when left in stop mode for more than 30 minutes.

◆ AUTO PLAY
Switches the Auto Play setting on or off. This function is useful when the player is connected to a timer (not supplied).

OFF	Switches this function off.
ON	Automatically starts playback when the player is turned on.

◆ DIMMER
Adjusts the lighting of the front panel display.

BRIGHT	Makes the lighting bright.
DARK	Makes the lighting dark.
AUTO DARK	Makes the lighting dark if you do not operate the player or the remote for a short while.
AUTO OFF	Turns off the lighting if you do not operate the player or the remote for a short while.
OFF	Turns off the lighting.

◆ PAUSE MODE (DVD VIDEO/DVD-RW only)
Selects the picture in pause mode.

AUTO	The picture, including subjects that move dynamically, is output with no jitter. Normally select this position.
FRAME	The picture, including subjects that do not move dynamically, is output in high resolution.

◆ PLAYBACK MEMORY (DVD VIDEO/ VIDEO CD only)
The player can store "SUBTITLE" and other settings of each disc for up to 40 discs (Playback Memory).
Set this function "ON" or "OFF."

ON	Stores the settings in memory when you eject the disc.
OFF	Does not store the settings in memory.

The following settings are stored in memory.
– ANGLE (page 60)*
– AUDIO (page 55)*
– BNR (page 61)
– DIGITAL VIDEO ENHANCER (page 64)
– SUBTITLE (page 60)*
– CUSTOM PICTURE MODE (page 62)
* DVD VIDEO only

Note
The player can store the settings of up to 40 discs. When you store the setting of disc number 41, the first disc setting is canceled.

◆ TRACK SELECTION (DVD VIDEO only)
Gives the sound track which contains the highest number of channels priority when you play a DVD VIDEO on which multiple audio formats (PCM, MPEG audio, DTS, or Dolby Digital format) are recorded.

OFF	No priority given.
AUTO	Priority given.

Notes
- When you set the item to "AUTO," the language may change. The "TRACK SELECTION" setting has higher priority than the "AUDIO" settings in "LANGUAGE SETUP" (page 74).
- If PCM, MPEG audio, DTS, and Dolby Digital sound tracks have the same number of channels, the player selects PCM, MPEG audio, DTS, and Dolby Digital sound tracks in this order.

◆ MULTI-DISC RESUME (DVD VIDEO/ VIDEO CD only)
Switches the Multi-disc Resume setting on or off. Resume playback point can be stored in memory for up to 40 different DVD VIDEO/ VIDEO CD discs (page 37).

ON	Stores the resume settings in memory for up to 40 discs (The settings remain in memory even if you select OFF.)
OFF	Does not store the resume settings in memory. Playback restarts at the resume point only for the current disc in the player.

◆ CD DIRECT
Eliminates the use of unnecessary circuits when playing CDs. This setting will be activated when you open or close the disc tray.
This function affects the output from the following jacks:
– LINE OUT L/R (AUDIO) 1/2 jacks
– 5.1CH OUTPUT jacks

OFF	Select this when playing CD discs, including CDs with DTS tracks.
ON	Eliminates the use of unnecessary circuits needed to play CDs.

Note
If you select "ON" when playing CDs with DTS tracks, the sound will become noisy.

Settings for the Sound (AUDIO SETUP)

"AUDIO SETUP" allows you to set the sound according to the playback and connection conditions.

Select "AUDIO SETUP" in the Setup Display. To use the display, see "Using the Setup Display" (page 73).
The default settings are underlined.

```
AUDIO SETUP
AUDIO ATT:           OFF
AUDIO DRC:           STANDARD
AUDIO FILTER:        SHARP
DOWNMIX:             DOLBY SURROUND
DIGITAL OUT:         ON
  DOLBY DIGITAL:     D-PCM
  DTS:               D-PCM
  48kHz/96kHz PCM:   48kHz/16bit
```

◆ AUDIO ATT (attenuation)
If the playback sound is distorted, set this item to "ON." The player reduces the audio output level.
This function affects the output of the following jacks:
– LINE OUT L/R (AUDIO) 1/2 jacks
– 5.1CH OUTPUT jacks

OFF	Normally, select this position.
ON	Select this when the playback sound from the speakers is distorted.

◆ AUDIO DRC (Dynamic Range Control) (DVD VIDEO/DVD-RW only)
Makes the sound clear when the volume is turned down when playing a DVD that conforms to "AUDIO DRC." This affects the output from the following jacks:
– LINE OUT L/R (AUDIO) 1/2 jacks
– 5.1CH OUTPUT jacks
– DIGITAL OUT (OPTICAL or COAXIAL) jack only when "DOLBY DIGITAL" is set to "D-PCM" (page 79).

STANDARD	Normally select this position.
TV MODE	Makes the low sounds clear even if you turn the volume down.
WIDE RANGE	Gives you the feeling of being at a live performance.

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◆ AUDIO FILTER (except Super Audio CD)
Selects the digital filter to reduce noise above 22.05 kHz (Sampling frequency (Fs) of the audio source is 44.1 kHz), 24 kHz (Fs is 48 kHz), or 48 kHz (Fs is above 96 kHz).

SHARP	Provides a wide frequency range and spatial feeling.
SLOW	Provides smooth and warm sound.

Note
There may be little effect by changing the digital filter depending on discs or playback environment.

◆ DOWNMIX (DVD VIDEO/DVD-RW only)
Switches the method for mixing down to 2 channels when you play a DVD which has rear sound elements (channels) or is recorded in Dolby Digital format. For details on the rear signal components, see "Displaying the audio information of the disc" (page 56). This function affects the output of the following jacks:
– LINE OUT L/R (AUDIO) 1/2 jacks
– DIGITAL OUT (OPTICAL or COAXIAL) jack when "DOLBY DIGITAL" and "DTS" is set to "D-PCM" (page 79).

DOLBY SUR-ROUND	Select this when the player is connected to an audio component that conforms to Dolby Surround (Pro Logic).
NORMAL	Select this when the player is connected to an audio component that does not conform to Dolby Surround (Pro Logic).

◆ DIGITAL OUT
Select this if audio signals are to be output via the DIGITAL OUT (OPTICAL or COAXIAL) jack.

ON	Normally select this position. When you select "ON," see "Setting the digital output signal" for further settings.
OFF	The influence of the digital circuit upon the analog circuit is minimal.

Note
Super Audio CD audio signals are not output from a digital jack.

Setting the digital output signal

Switches the method of outputting audio signals when you connect a component such as an amplifier (receiver) or MD deck with a digital input jack.
For connection details, see page 22.
Select "DOLBY DIGITAL," "MPEG," "DTS," and "48 kHz/96 kHz PCM" after setting "DIGITAL OUT" to "ON."

```
AUDIO SETUP
AUDIO ATT:           OFF
AUDIO DRC:           STANDARD
AUDIO FILTER:        SHARP
DOWNMIX:             DOLBY SURROUND
DIGITAL OUT:         ON
  DOLBY DIGITAL:     D-PCM
  DTS:               D-PCM
  48kHz/96kHz PCM:   48kHz/16bit
```

If you connect a component that does not conform to the selected audio signal, a loud noise (or no sound) will come out from the speakers, damaging your ears or speakers.

◆ DOLBY DIGITAL (DVD VIDEO/DVD-RW only)
Selects the type of Dolby Digital signal.

D-PCM	Select this when the player is connected to an audio component without a built-in Dolby Digital decoder. You can select whether the signals conform to Dolby Surround (Pro Logic) or not by making adjustments to the "DOWNMIX" item in "AUDIO SETUP" (page 79).
DOLBY DIGITAL	Select this when the player is connected to an audio component with a built-in Dolby Digital decoder.

◆ MPEG (DVD VIDEO/DVD-RW only) (DVP-NS915V only)
Selects the type of MPEG audio signal.

PCM	Select this when the player is connected to an audio component without a built-in MPEG decoder. If you play MPEG audio sound tracks, the player outputs stereo signals via the DIGITAL OUT (OPTICAL or COAXIAL) jack.
MPEG	Select this when the player is connected to an audio component with a built-in MPEG decoder.

◆ DTS (DVD VIDEO only)
Selects the type of DTS signal.

D-PCM	Select this when the player is connected to an audio component without a built-in DTS decoder. If you play DTS audio sound tracks, the player outputs stereo signals via the DIGITAL OUT (OPTICAL or COAXIAL) jacks.
DTS	Select this when the player is connected to an audio component with a built-in DTS decoder.

◆ 48kHz/96kHz PCM (DVD VIDEO only)
Selects the sampling frequency of the audio signal.

48kHz/16bit	The audio signals of DVD VIDEOs are always converted to 48kHz/16bit.
96kHz/24bit	All types of signals including 96kHz/24bit are output in their original format. However, if the signal is encrypted for copyright protection purposes, the signal is only output as 48kHz/16bit.

Notes
- Even if you set "48kHz/96kHz PCM" to "96kHz/24bit," the sampling frequency is converted to 48kHz/16bit when a "SURROUND" mode (page 57) is selected.
- The analog audio signals from the LINE OUT L/R (AUDIO) jacks and 5.1CH OUTPUT jacks are not affected by this setting and keep their original sampling frequency level.

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Settings and Adjustments

Settings for the Speakers

(SPEAKER SETUP)

To obtain the best possible surround sound, set the size of the speakers you have connected and their distance from your listening position. Then use the test tone to adjust the volume and the balance of the speakers to the same level.
This setting is effective when connecting the speaker with 5.1 CH OUTPUT jacks (page 27).

Select "SPEAKER SETUP" in the Setup Display. To use the display, see "Using the Setup Display" (page 73).
The default settings are underlined.

```
SPEAKER SETUP
  SIZE:
  DISTANCE:
  BALANCE:
  LEVEL:
  TEST TONE:        OFF
  FRONT:            LARGE
  CENTER:           LARGE
  REAR:             LARGE(REAR)
  SUBWOOFER:        YES
```
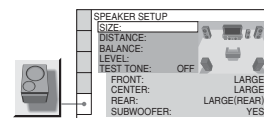
To return to the default setting
Select the item, then press CLEAR. Note that only the "SIZE" setting does not return to the default setting.

◆ SIZE
Selects the size of the speakers.
• FRONT

LARGE	Normally select this position.
SMALL	Select this when the sound distorts or the surround effects are difficult to hear.

• CENTER

NONE	Select this if you do not connect a center speaker.
LARGE	Normally select this position.
SMALL	Select this when the sound distorts or the surround effects are difficult to hear.

• REAR

NONE	Select this if you do not connect rear speakers.
LARGE	(REAR/SIDE): Normally select this position. Select according to the rear speaker position*.
SMALL	(REAR/SIDE): Select this when the sound distorts or the surround effects are difficult to hear. Select according to the rear speaker position*.

* Rear speaker position
Correctly specify the location of the rear speakers to enjoy the surround effect.
• Set to "SIDE," if the location of the rear speakers corresponds to section **A** below.
• Set to "REAR," if the location of the rear speakers corresponds to section **B** below.
This setting affects only "VIRTUAL REAR SHIFT," "VIRTUAL MULTI REAR," and "VIRTUAL MULTI DIMENSION" mode (page 57). This setting does not affect the Super Audio CD Multi audio signals.
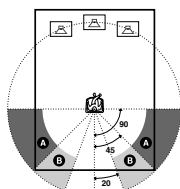
• SUBWOOFER

NONE	Select this if you do not connect a subwoofer.
YES	Select this if you connect a subwoofer to output the LFE (low frequency effect) signals from the subwoofer.

Notes
• The cut off frequency for the subwoofer is fixed at 120 Hz.
• If your speakers are too small to reproduce low bass frequencies, utilize a subwoofer for low frequency sound. When you set all speaker settings to "SMALL," the bass redirection circuitry will be activated and the bass frequencies are output from the subwoofer.
• Even if there are fewer than 6 speakers connected, the player distributes the audio signal components to the front speakers.

◆ DISTANCE
Sets the distance from your listening position to the speakers.
Set the distance to your front speakers in "FRONT" first (**C**). Values in "CENTER" (center speaker) and "REAR" (rear speaker) will automatically change to the same value (**D** and **E**). Adjust these values to reflect the actual distance to your center and rear speakers.

(4~50 ft/ 1~15 m)   (4~50 ft/ 1~15 m)
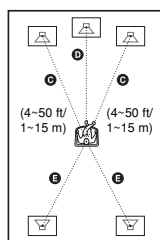
Be sure to change the value in the Setup Display when you move the speakers.
The default adjustments are in parentheses.

For DVP-NS755V

FRONT (10 ft)	Set this between 4 and 50 feet in 1 foot increments.
CENTER (10 ft)	Set this within −5 and +2 feet of the "FRONT" setting in 1 foot increments. For example, if "FRONT" is set to 6 feet, "CENTER" can be set between 1 and 8 feet.
REAR (10 ft)	Set this between the "FRONT" setting and −16 feet in 1 foot increments. For example, if "FRONT" is set to 17 feet, "REAR" can be set between 1 and 17 feet.

For DVP-NS915V

FRONT (3 m)	Set this between 1 and 15 meters in 0.2 meter increments.
CENTER (3 m)	Set this within −1.6 and +0.6 meters of the "FRONT" setting in 0.2 meter increments. For example, if "FRONT" is set to 6 meters, "CENTER" can be set between 4.4 and 6.6 meters.
REAR (3 m)	Set this between the "FRONT" setting and −5 meters in 0.2 meter increments. For example, if "FRONT" is set to 6 meters, "REAR" can be set between 1 and 6 meters.

Notes
• If each of the front or rear speakers are not placed at an equal distance from your listening position, set the distance according to the closest speaker.
• Do not place the rear speakers farther away from your listening position than the front speakers.
• These settings do not affect the Super Audio CD Multi audio signals.

◆ BALANCE
Varies the balance of the left and right speakers. Be sure to set "TEST TONE" to "ON" for easy adjustment.
The default adjustments are in parentheses.

FRONT (0 dB)	Set this between −6 dB [L] and +6 dB [R] (0.5 dB increments).
REAR (0 dB)	Set this between −6 dB [L] and +6 dB [R] (0.5 dB increments).

◆ LEVEL
Varies the level of each speaker. Be sure to set "TEST TONE" to "ON" for easy adjustment.
The default adjustments are in parentheses.

FRONT (0 dB)	Set this between −6 dB and 0 dB (0.5 dB increments).
CENTER (0 dB)	Set this between −12 dB and 0 dB (0.5 dB increments).
REAR (0 dB)	Set this between −12 dB and 0 dB (0.5 dB increments).
SUBWOOFER (0 dB)	Set this between −10 dB and +10 dB (0.5 dB increments).

To adjust the volume of all the speakers at one time
Use the amplifier's (receiver's) volume control.

◆ TEST TONE
The speakers will emit a test tone. Use this when you use the 5.1CH OUTPUT jacks and adjust the "BALANCE" and "LEVEL."

OFF	The test tone is not emitted from the speakers.
ON	The test tone is emitted from each speaker in sequence while adjusting balance or level.

Adjusting the speaker volume and level

1 Select "SPEAKER SETUP" in the Setup Display.

2 Select "TEST TONE" and set to "ON."
You will hear the test tone from each speaker in sequence.

3 From your listening position, select "BALANCE" or "LEVEL" and adjust the value of "BALANCE" using ←/→ and "LEVEL" using ↑/↓.
The test tone is emitted from both left and right speakers simultaneously.

4 Select "TEST TONE" and set to "OFF" to turn off the test tone.

Note
The test tone signals are not output from the digital jack.

Troubleshooting

If you experience any of the following difficulties while using the player, use this troubleshooting guide to help remedy the problem before requesting repairs. Should any problem persist, consult your nearest Sony dealer.

Power

The power is not turned on.
➔ Check that the AC power cord is connected securely.

Picture

There is no picture/picture noise appears.
➔ Re-connect the connecting cord securely.
➔ The connecting cords are damaged.
➔ Check the connection to your TV (page 20) and switch the input selector on your TV so that the signal from the player appears on the TV screen.
➔ The disc is dirty or flawed.
➔ If the picture output from your player goes through your VCR to get to your TV or if you are connected to a combination TV/ VIDEO player, the copy-protection signal applied to some DVD programs could affect picture quality. If you still experience problems even when you connect your player directly to your TV, please try connecting your player to your TV's S VIDEO input (page 20).
➔ If the color system of your player does not match with that of your TV, change the color system of the player. For details, see page 17. (You cannot change the color system of the DVD disc itself.)
➔ You have set "COMPONENT OUT" in "SCREEN SETUP" to "PROGRESSIVE" even though your TV cannot accept the signal in progressive format. In this case, set the COMPONENT VIDEO OUT/SCAN SELECT switch on the back panel of the player to INTERLACE. Then set "COMPONENT OUT" to "INTERLACE" after you can see the TV screen correctly, and reset the COMPONENT VIDEO OUT/ SCAN SELECT switch to SELECTABLE.

➔ Even if your TV is compatible with progressive format 480p (525p) signals, the image may be affected when you set "COMPONENT OUT" to "PROGRESSIVE." In this case, set "COMPONENT OUT" to "INTERLACE."

Even though you set the aspect ratio in "TV TYPE" of "SCREEN SETUP," the picture does not fill the screen.
➔ The aspect ratio of the disc is fixed on your DVD.

Sound

There is no sound.
➔ Re-connect the connecting cord securely.
➔ The connecting cord is damaged.
➔ The player is connected to the wrong input jack on the amplifier (receiver) (page 25, 26, 27).
➔ The amplifier (receiver) input is not correctly set.
➔ The player is in pause mode or in Slow-motion Play mode.
➔ The player is in fast forward or fast reverse mode.
➔ If the audio signal does not come through the DIGITAL OUT (OPTICAL or COAXIAL) jack, check the audio settings (page 79).
➔ Super Audio CD audio signals are not output from the digital jack.
➔ While playing a Super VCD on which the audio track 2 is not recorded, no sound will come out when you select "2:STEREO," "2:1/L," or "2:2/R."

Sound distortion occurs.
➔ Set "AUDIO ATT" in "AUDIO SETUP" to "ON" (page 78).

The sound volume is low.
➔ The sound volume is low on some DVDs. The sound volume may improve if you set "AUDIO DRC" to "TV MODE" (page 78).
➔ Set "AUDIO ATT" in "AUDIO SETUP" to "OFF" (page 78).

The surround effect is difficult to hear when you are playing a Dolby Digital, DTS, or MPEG audio sound track.
➜ Check the speaker connections and setting (page 27, 29, 79).
➜ The 5.1 channel sound is not recorded on the disc being played.

The sound comes from the center speaker only.
➜ Depending on the disc, the sound may come from the center speaker only.
➜ Set "SURROUND" to "OFF" (page 57).

Operation

The remote does not function.
➜ The batteries in the remote are weak.
➜ There are obstacles between the remote and the player.
➜ The distance between the remote and the player is too far.
➜ The remote is not pointed at the remote sensor on the player.

The disc does not play.
➜ The disc is turned over.
  Insert the disc with the playback side facing down on the disc tray.
➜ The disc is skewed.
➜ The player cannot play certain discs (page 6).
➜ The region code on the DVD does not match the player.
➜ Moisture has condensed inside the player (page 3).
➜ The player cannot play DVD-Rs, DVD-RWs, CD-Rs, or CD-RWs that are not finalized (page 7).

The MP3 audio track cannot be played (page 42).
➜ The DATA CD is not recorded in the MP3 format that conforms to ISO9660 Level 1/Level 2 or Joliet.
➜ The MP3 audio track does not have the extension ".MP3."
➜ The data is not formatted in MP3 even though it has the extension ".MP3."
➜ The data is not MPEG1 Audio Layer 3 data.
➜ The player cannot play audio tracks in MP3PRO format.

"Copyright lock" appears and the screen turns blue when playing a DVD-RW disc.
➜ Images taken from digital broadcasts, etc., may contain copy protection signals, such as complete copy protection signals, single copy signals, and restriction-free signals. When images that contain copy protection signals are played, a blue screen may appear instead of the images. It may take a while when looking for playable images.

The title of the MP3 audio album or track is not correctly displayed.
➜ The player can only display numbers and alphabet. Other characters are displayed as "*."

The disc does not start playing from the beginning.
➜ Program Play, Shuffle Play, Repeat Play, or A-B Repeat Play has been selected (page 43).
➜ Resume play has taken effect (page 37).

The player starts playing the disc automatically.
➜ The disc features an auto playback function.
➜ "AUTO PLAY" in "CUSTOM SETUP" is set to "ON" (page 77).

Playback stops automatically.
➜ While playing discs with an auto pause signal, the player stops playback at the auto pause signal.

You cannot perform some functions such as Stop, Search, Slow-motion Play, Repeat Play, Shuffle Play, or Program Play.
➜ Depending on the disc, you may not be able to do some of the operations above. See the operating manual that comes with the disc.

The language for the sound track cannot be changed.
➜ Try using the DVD's menu instead of the direct selection button on the remote (page 38).
➜ Multilingual tracks are not recorded on the DVD being played.
➜ The DVD prohibits the changing of the language for the sound track.

The subtitle language cannot be changed or turned off.
➜ Try using the DVD's menu instead of the direct selection button on the remote (page 38).
➜ Multilingual subtitles are not recorded on the DVD being played.
➜ The DVD prohibits the changing of the subtitles.

The angles cannot be changed.
➜ Try using the DVD's menu instead of the direct selection button on the remote (page 38).
➜ Multi-angles are not recorded on the DVD being played.
➜ The angle can only be changed when the "ANGLE" indicator lights up on the front panel display (page 10).
➜ The DVD prohibits changing of the angles.

The player does not operate properly.
➜ When static electricity, etc., causes the player to operate abnormally, unplug the player.

Nothing is displayed on the front panel display.
➜ "DIMMER" in "CUSTOM SETUP" is set to "OFF" or "AUTO OFF." Set "DIMMER" to any setting other than "OFF" or "AUTO OFF" (page 77).

5 numbers or letters are displayed on the screen and on the front panel display.
➜ The self-diagnosis function was activated. (See the table on page 87.)

The disc tray does not open and "LOCKED" appears on the front panel display.
➜ Child Lock is set (page 34).

The disc tray does not open and "TRAY LOCKED" appears on the front panel display.
➜ Contact your Sony dealer or local authorized Sony service facility.

86

"Data error" appears on the TV screen when playing a DATA CD.
➜ The MP3 audio track you want to play is broken.
➜ The data is not MPEG1 Audio Layer 3 data.

Self-diagnosis Function

(When letters/numbers appear in the display)

When the self-diagnosis function is activated to prevent the player from malfunctioning, a five-character service number (e.g., C 13 50) with a combination of a letter and four digits appears on the screen and the front panel display. In this case, check the following table.

First three characters of the service number	Cause and/or corrective action
C 13	The disc is dirty. ➜ Clean the disc with a soft cloth (page 8).
C 31	The disc is not inserted correctly. ➜ Re-insert the disc correctly.
E XX (xx is a number)	To prevent a malfunction, the player has performed the self-diagnosis function. ➜ Contact your nearest Sony dealer or local authorized Sony service facility and give the 5-character service number. Example: E 61 10

Glossary

Chapter (page 10)
Sections of a picture or a music feature that are smaller than titles. A title is composed of several chapters. Depending on the disc, no chapters may be recorded.

Dolby Digital (page 27, 79)
Digital audio compression technology developed by Dolby Laboratories. This technology conforms to 5.1-channel surround sound. The rear channel is stereo and there is a discrete subwoofer channel in this format. Dolby Digital provides the same 5.1 discrete channels of high quality digital audio found in Dolby Digital cinema audio systems. Good channel separation is realized because all of the channel data are recorded discretely and little deterioration is realized because all channel data processing is digital.

Dolby Surround (Pro Logic) (page 26)
Audio signal processing technology that Dolby Laboratories developed for surround sound. When the input signal contains a surround component, the Pro Logic process outputs the front, center and rear signals. The rear channel is monaural.

DTS (page 27, 80)
Digital audio compression technology that Digital Theater Systems, Inc. developed. This technology conforms to 5.1-channel surround sound. The rear channel is stereo and there is a discrete subwoofer channel in this format. DTS provides the same 5.1 discrete channels of high quality digital audio.
Good channel separation is realized because all of the channel data is recorded discretely and little deterioration is realized because all channel data processing is digital.

DVD VIDEO (page 6)
A disc that contains up to 8 hours of moving pictures even though its diameter is the same as a CD.
The data capacity of a single-layer and single-sided DVD is 4.7 GB (Giga Byte), which is 7 times that of a CD. The data capacity of a double-layer and single-sided DVD is 8.5

GB, a single-layer and double-sided DVD is 9.4 GB, and double-layer and double-sided DVD is 17GB.
The picture data uses the MPEG 2 format, one of the worldwide standards of digital compression technology. The picture data is compressed to about 1/40 (average) of its original size. The DVD also uses a variable rate coding technology that changes the data to be allocated according to the status of the picture. Audio information is recorded in a multi-channel format, such as Dolby Digital, allowing you to enjoy a more real audio presence.
Furthermore, various advanced functions such as the multi-angle, multilingual, and Parental Control functions are provided with the DVD.

DVD-RW (page 6)
A DVD-RW is a recordable and rewritable disc with the same size as the DVD VIDEO. The DVD-RW can be recorded in two different modes: VR mode and Video mode. VR (Video Recording) mode enables various programming and editing functions, some of which are limited in the case of Video mode. Video mode complies with DVD VIDEO format and can be played on other DVD players while a DVD-RW recorded in VR mode can only be played on DVD-RW compliant players. The "DVD-RW" appearing in this manual, and the on-screen displays refer to DVD-RWs in VR mode.

Film based software, Video based software (page 76)
DVDs can be classified as Film based or Video based software. Film based DVDs contain the same images (24 frames per second) that are shown at movie theaters. Video based DVDs, such as television dramas or sit-coms, displays images at 30 frames (or 60 fields) per second.

Index (CD)/Video Index (VIDEO CD) (page 10)
A number that divides a track into sections to easily locate the point you want on a CD or VIDEO CD. Depending on the disc, no index may be recorded.

Interlace format (page 76)
Interlace format shows every other line of an image as a single "field" and is the standard method for displaying images on television. The even number field shows the even numbered lines of an image, and the odd numbered field shows the odd numbered lines of an image.

MPEG audio (page 27, 80)
International standard coding system used to compress audio digital signals authorized by ISO/IEC. MPEG 1 conforms to up to 2-channel stereo. MPEG 2, used on DVDs, conforms to up to 7.1-channel surround.

Progressive format (page 76)
Compared to the Interlace format that alternately shows every other line of an image (field) to create one frame, the Progressive format shows the entire image at once as a single frame. This means that while the Interlace format can show 30 frames (60 fields) in one second, the Progressive format can show 60 frames in one second. The overall picture quality increases and still images, text, and horizontal lines appear sharper. This player is compatible with the 480 (525) progressive format.

Scene (page 10)
On a VIDEO CD with PBC (playback control) functions, the menu screens, moving pictures and still pictures are divided into sections called "scenes."

Super Audio CD (page 6)
A Super Audio CD disc can reproduce sounds that are extremely faithful to the original sound by use of DSD (Direct Stream Digital) technology. This technology utilizes a sampling frequency of 2.8224 MHz, which is 64 times that of a conventional CD, and 1-bit quantization that enables the disc to hold 4 times the amount of information that a standard PCM format CD can hold. Super Audio CDs are divided into the following types.
• Super Audio CD (single layer disc)
  This disc consists of a single HD layer*.
  *High density signal layer for the Super Audio CD

HD (high density) layer
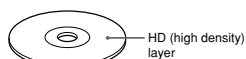
- **Super Audio CD (dual layer disc)**
  This disc consists of dual HD layers and is capable of extended play over long periods. Also, as the dual layer disc consists of dual HD layers on one side only, you do not have to turn the disc over during playback.
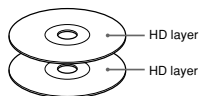
HD layer

HD layer

- **Super Audio CD + CD (Hybrid disc)**
  This disc consists of an HD layer and a CD layer. Also, as the dual layers are on one side only, you do not have to turn the disc over during playback. You can play the CD layer using a conventional CD player.

CD layer

HD layer
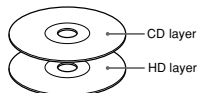
- **2 channel + Multi-channel Super Audio CD**
  This disc consists of the 2 channel playback area and the multi-channel playback area.

2 channel playback area

Multi-channel playback area
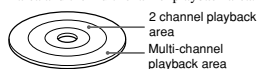
Title (page 10)
The longest section of a picture or music feature on a DVD, movie, etc., in video software, or the entire album in audio software.

Track (page 10)
Sections of a picture or a music feature on a CD or VIDEO CD (the length of a song).

Language Code List

For details, see pages 55, 60, 74.
The language spellings conform to the ISO 639: 1988 (E/F) standard.

Code	Language	Code	Language	Code	Language	Code	Language
1027	Afar	1183	Irish	1347	Maori	1507	Samoan
1028	Abkhazian	1186	Scots Gaelic	1349	Macedonian	1508	Shona
1032	Afrikaans	1194	Galician	1350	Malayalam	1509	Somali
1039	Amharic	1196	Guarani	1352	Mongolian	1511	Albanian
1044	Arabic	1203	Gujarati	1353	Moldavian	1512	Serbian
1045	Assamese	1209	Hausa	1356	Marathi	1513	Siswati
1051	Aymara	1217	Hindi	1357	Malay	1514	Sesotho
1052	Azerbaijani	1226	Croatian	1358	Maltese	1515	Sundanese
1053	Bashkir	1229	Hungarian	1363	Burmese	1516	Swedish
1057	Byelorussian	1233	Armenian	1365	Nauru	1517	Swahili
1059	Bulgarian	1235	Interlingua	1369	Nepali	1521	Tamil
1060	Bihari	1239	Interlingue	1376	Dutch	1525	Telugu
1061	Bislama	1245	Inupiak	1379	Norwegian	1527	Tajik
1066	Bengali; Bangla	1248	Indonesian	1393	Occitan	1528	Thai
1067	Tibetan	1253	Icelandic	1403	(Afan)Oromo	1529	Tigrinya
1070	Breton	1254	Italian	1408	Oriya	1531	Turkmen
1079	Catalan	1257	Hebrew	1417	Punjabi	1532	Tagalog
1093	Corsican	1261	Japanese	1428	Polish	1534	Setswana
1097	Czech	1269	Yiddish	1435	Pashto; Pushto	1535	Tonga
1103	Welsh	1283	Javanese			1538	Turkish
1105	Danish	1287	Georgian	1436	Portuguese	1539	Tsonga
1109	German	1297	Kazakh	1463	Quechua	1540	Tatar
1130	Bhutani	1298	Greenlandic	1481	Rhaeto-Romance	1543	Twi
1142	Greek	1299	Cambodian			1557	Ukrainian
1144	English	1300	Kannada	1482	Kirundi	1564	Urdu
1145	Esperanto	1301	Korean	1483	Romanian	1572	Uzbek
1149	Spanish	1305	Kashmiri	1489	Russian	1581	Vietnamese
1150	Estonian	1307	Kurdish	1491	Kinyarwanda	1587	Volapük
1151	Basque	1311	Kirghiz	1495	Sanskrit	1613	Wolof
1157	Persian	1313	Latin	1498	Sindhi	1632	Xhosa
1165	Finnish	1326	Lingala	1501	Sangho	1665	Yoruba
1166	Fiji	1327	Laothian	1502	Serbo-Croatian	1684	Chinese
1171	Faroese	1332	Lithuanian			1697	Zulu
1174	French	1334	Latvian; Lettish	1503	Singhalese		
				1505	Slovak		
1181	Frisian	1345	Malagasy	1506	Slovenian	1703	Not specified

Additional Information

1-22 E

SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

2-1. CASE REMOVAL

① Tapping screw

④ Case

③ Three screws (B3)

② Tapping screw

2-2. TRAY COVER ASS'Y REMOVAL

④ Tray cover ass'y

③ Two claws

② Pull the tray in the direction of arrow Ⓑ.

Ⓑ

Ⓐ

① Insert a tapering driver into the aperture of the unit bottom, and move the lever of chuck cam in the direction of arrow Ⓐ.

2-3. FRONT PANEL BLOCK ASS'Y REMOVAL

⑤ Two claws

④ Claw

① Flexible board (CN406)

③ Two claws

② Claw

⑥ Front panel block ass'y

2-4. POWER BLOCK REMOVAL

① Connector (FAE-009: CN101)

② Connector (CN201)

③ Two screws (B3)

④ Two screws (B3)

⑤ Power block

2-5. MECHANISM DECK REMOVAL

② Three screws
(B3)

④ Mechanism deck

① Two flexible flat cables
(FMO-001: CN203,
FMO-002: CN204)

① Flexible flat cable
(FMM-035: CN201)

③ Two claws

2-7. MB-105 BOARD REMOVAL

① Flexible flat cable
(FAE-009: CN601)

② Five screws
(B3)

③ MB-105 board

2-6. AV-64 BOARD REMOVAL

① Connector
(CN302)

⑤ AV-64 board

④ Screw

*EXCEPT
NS-705V/
905: AEP, UK, RU*

② Two screws
(B3)

③ Seven screws
(B3)

2-8. ER-19 BOARD REMOVAL

④ Two screws
(B3)

① Flexible flat cable
(FAE-009: CN901)

⑤ ER-19 board

② Two screws
(B3)

NS-905V: AEP, UK, RU

③ Two screws
(B3)

*NS-705V/
905V: AEP, UK, RU*

2-9. IF-94 BOARD REMOVAL

② Two screws (B3)

③ FP support

⑤ Two screws (B3)

④ Connector (CN102)

⑥ Screw (B3)

① Connector (CN201)

⑦ IF-94 board

2-10. OPTICAL PICK-UP REMOVAL

② Insulator

① Insulator screw

② Insulator

② Insulator

② Insulator

① Insulator screw

① Insulator screw
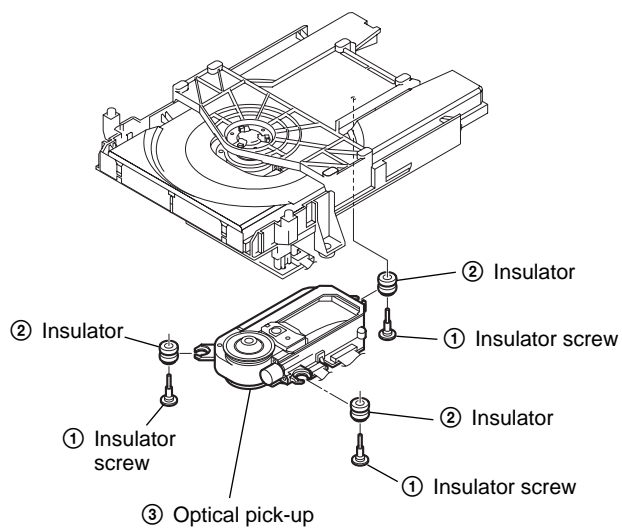
③ Optical pick-up

2-11. INTERNAL VIEWS

DC motor (loading)
not supplied
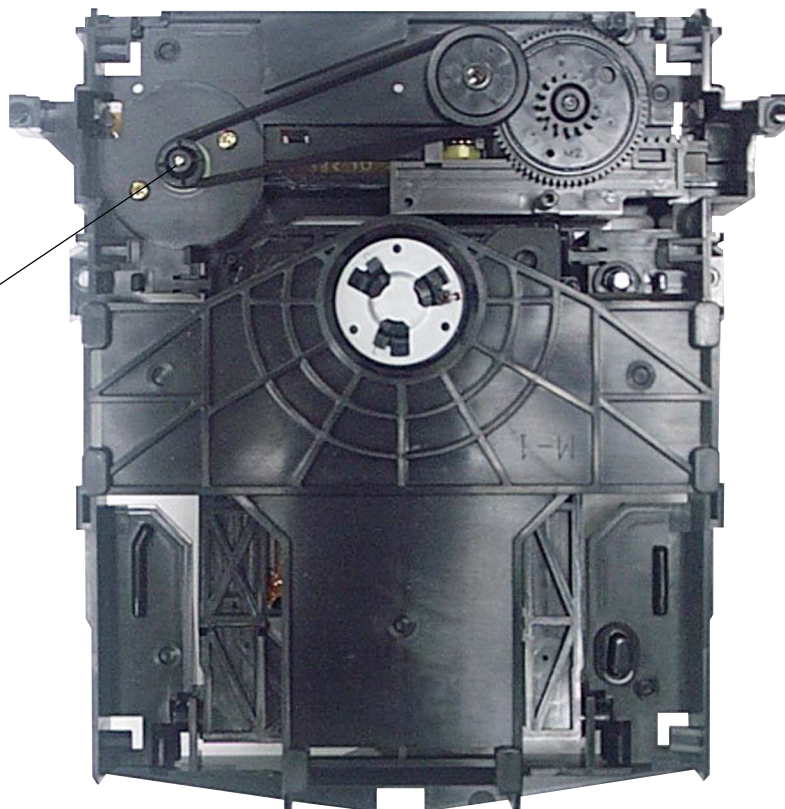
DC motor (loading)
not supplied

Optical pick-up
(KHM-270AAA)
A-6062-709-A
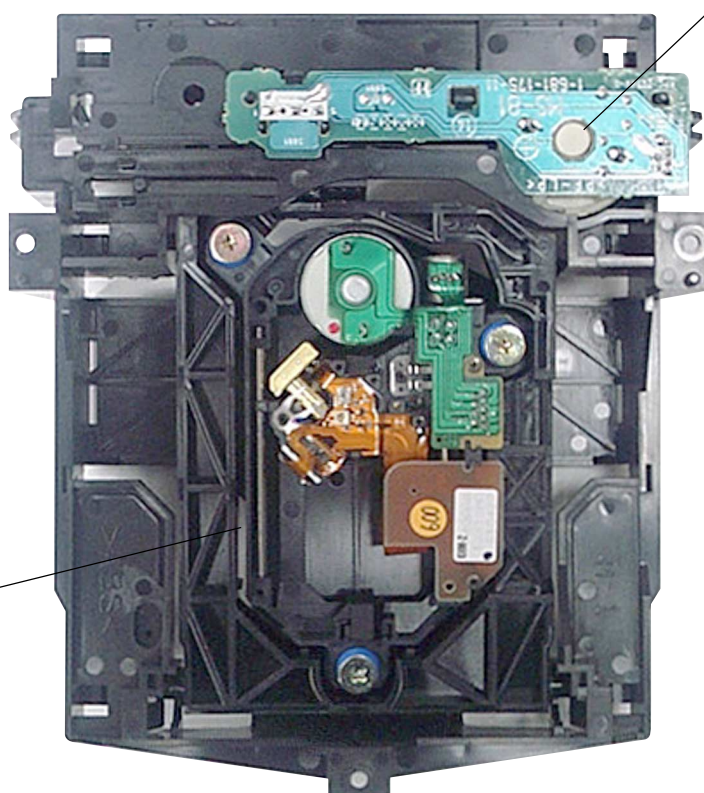
2-12. CIRCUIT BOARDS LOCATION

Power Block
(ETXNY393N2F (NS705V/NS905V/NS915V: HK, SP, MY, TH, PH, IA, VTM, KR))
(HS12S1U (NS755V/NS915V: TW))
(HS12S1F (NS915V: LA))
(SWITCHING REGULATOR)

ER-19
(NS705V/NS905V: AEP, UK, RUS)
(EURO AV)

AV-64
(AUDIO/VIDEO OUT)

LE-34
(LED)

MS-81
(LOADING)

IF-94
(INTERFACE CONTROL)

MB-105
(SIGNAL PROCESS, SERVO)
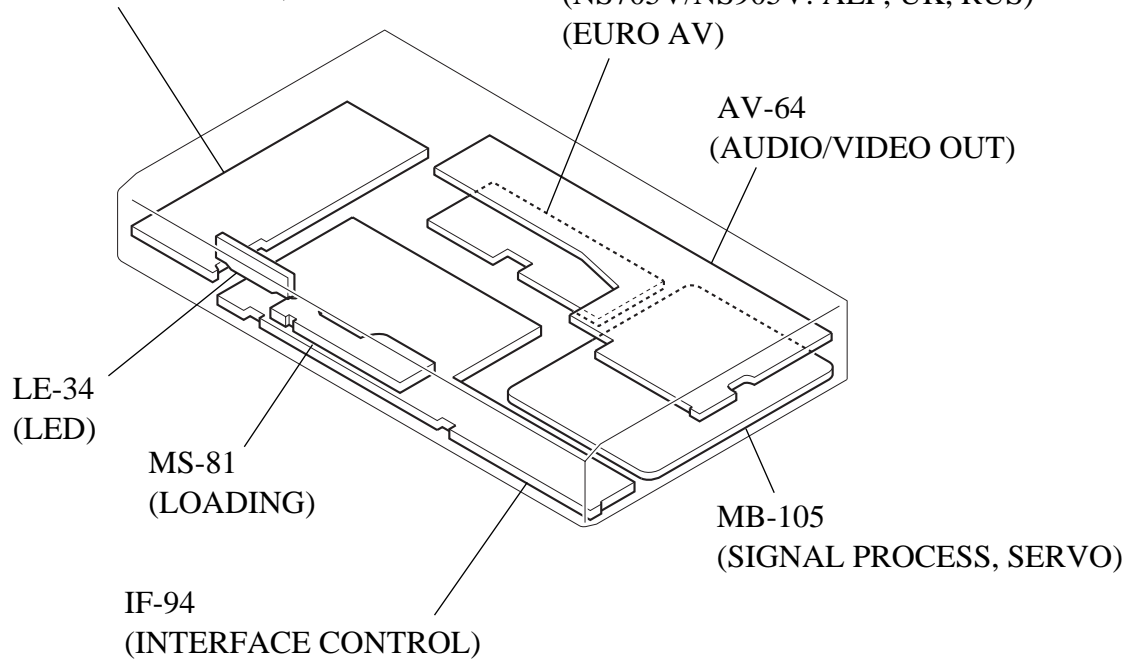
SECTION 3
BLOCK DIAGRAMS

3-1. OVERALL BLOCK DIAGRAM

AV-64 BOARD (SEE PAGE 4-39 to 4-44)

EXCEPT NS705V/NS905V :AEP, UK, RUS

J103
Y
PB
PR
COMPONENT VIDEO OUT

MB-105 BOARD (SEE PAGE 4-11 to 4-32)

NS755V/NS915V

IC602 I/P CONVERTER
IC603 16M SDRAM
NS905V
IC604 VIDEO ENCORDER
NS705V

Y, Cb, Cr

V, Y, C

IC103 VIDEO BUFFER

EXCEPT NS705V/NS905V :AEP, UK, RUS

J102 (1/2)
VIDEO 2 VIDEO 1
VIDEO LINE OUT

NS705V/NS905V: AEP, UK, RUS

J101
S VIDEO OUT

2 1

BASE UNIT KHM-270AAA/ SERVICE ASSY

OPTICAL DEVICE

DVD/CD PD IC

IC303 16M DRAM

IC406 64M SDRAM

RF

IC201 DVD/CD RF AMP, SERVO ERROR PROCESS

SIGO

IC301 ARP, SERVO DSP

SDI 0 – 7

IC403 AV DECODER

CDDOUT, ACH12, ACH34, ACH56, BCK, LRCK

IC501 AUDIO DSP

SPDIF

NS705V/NS905V: AEP, UK, RUS

ER-19 BOARD (SEE PAGE 4-53)

NS905V:AEP,UK,RUS

V, Y, C

V/Y, R/C, G, B

IC901 VIDEO BUFFER, SELECT SW

RY901 – 903 SW

R, G, B

CNJ901 LINE 2

CDDOUT, CDDATA, CDBCK, CDLRCK

R, G, B

V/Y, R/C, G, B

CNJ902 LINE 1 (RGB) –TV

NS905V:AEP,UK,RUS

RY904 SW

NS705V

SDI 0 – 7

IC905 SACD DECODER

FOCUS COIL

TRACKING COIL

SIGO

IC906 AMP

IC106 32M FLASH or IC107 OTP

IC903 16M SDRAM

NS755V/NS915V

S101 SCAN SELECT
SELECTABLE
INTERLACE
PROGRESSIVE

+5V

IC202 FOCUS/ TRACKING COIL DRIVE, SPINDLE/ SLED/ LOADING MOTOR DRIVE

INLIMIT SW

SPINDLE MOTOR (M)

SLED MOTOR (M)

PARALLEL BUS

IC108 1M SRAM

IC104 SYSTEM CONTROL

IC504 AUDIO D/A CONVERTER

J301
COAXIAL
DIGITAL OUT

IC301
OPTICAL

EXCEPT NS705V/NS905V :AEP, UK, RUS

J102 (2/2)
AUDIO 2 AUDIO 1
AUDIO 1 LINE OUT

NS705V/NS905V:AEP, UK, RUS

M001 LOADING MOTOR (M)

SERIAL BUS

IIC BUS

IC101 EEPROM

SERIAL BUS

IC502 AUDIO D/A CONVERTER

IC303 AUDIO AMP

J201
FRONT
REAR 5.1CH OUTPUT

IC201
IC202
IC203
5.1CH AUDIO AMP

WOOFER CENTER

S001 CHUCK/TRAY DETECT

MS-81 BOARD (SEE PAGE 4-6)

+1.8V

SW+3.3V +5V M+11V

AI+5V EVER+3.3V SW–13V AU+11V

LE-34 BOARD (SEE PAGE 4-34)

SW+5V
+3.3V

- Abbreviation
AUS : Australian
CND : Canadian
EA : Saudi Arabia
HK : Hong Kong
IA : Indonesia
KR : Korea
LA : Latin-America
ME : Middle East
MY : Malaysia
NZ : New Zealand
PH : Philippines
RUS : Russian
SP : Singapore
TH : Thailand
TW : Taiwan
VTM : Vietnam

POWER SUPPLY BLOCK
(ETXNY393N2F) (NS705V/NS905V/NS915V : HK, SP, MY, TH, PH, IA,VTM, KR)
(SEE PAGE 4-57)
POWER BLOCK
(HS12S1U) (NS755V/NS915V : TW)
(SEE PAGE 4-61)
POWER BLOCK
(HS12S1F) (NS915V : LA)
(SEE PAGE 4-65)

AC IN

REG

I/(power)

SWITCHING REG

EVER+3.3V
SW+3.3V
+5V
SW+11V

P-CONT

EVER+11V
EVER–13V

ND401 FLUORESCENT INDICATOR TUBE

IC404 IF CON

FUNCTION KEY

EXCEPT NS705V

JOG SHUTTLE

PUSH ENTER

NS705V

PUSH ENTER

CURSOR STICK

IF-94 BOARD (SEE PAGE 4-49)

05

DVP-NS705V/NS755V/NS905V/NS915V

3-2. RF/SERVO BLOCK DIAGRAM

3-3. SIGNAL PROCESSOR BLOCK DIAGRAM

MB-105 BOARD (2/5)
(SEE PAGE 4-13 to 4-16)

IC303
16M DRAM

IC406
64M SDRAM

IC301 ⑩ (DVD play)
500 mV/DIV   100 ns/DIV
1.4 Vp-p

IC301 ⑩ (CD play)
500 mV/DIV   200 ns/DIV
1.4 Vp-p

RF/SERVO
(SEE PAGE 3-4)   SIG0

RAMA 0 – 9
RAMD 0 – 15
WE, RAS
LCAS, UCAS

65 – 74   MA 0 – 9
36 – 43·46 – 53   MD 0 – 15
29·31·30

PCLK
SDI 0 – 7
XSRQ
XSHD
SDCK
XSAK
SDEF
COLRCK/TDOKT
TDOSA
TCK
TMS
XFRRST

AUDIO 1
(SEE PAGE 3-13)

ADAD 0 – 11
ADDT 0 – 15
A11
CLK, LKE, LDOM, UDOM
CS, WE, CAS, RAS

105·108·110·113·115·116·118·120
135·138·140·143·145·148·150·151·153·154   SDDQ 0 – 15
121   SD CS10n
122·124·125·127·129·130·132·133

IC403 ㊲
660 mVp-p (H)

IC403 ㊹
660 mVp-p (H)

IC403 ㊶
660 mVp-p (H)

IC403 ㊼
1.1 Vp-p (H)

IC403 ㊸
810 mVp-p (H)

IC403 ㊺
940 mVp-p (H)

IC403
AV DECODER

111 RFIN1
113 RFIN2

PLCKO 87

SD 0 – 7   77·84   SDI 0 – 7   37·40·42·45   DTI 0 – 7

SDCK
XSHD
XSRQ
XSAK
SDEF   57·59·63·64   SDCK, XSHD, XSRQ, XSAK, SDEF   47·51   ICLKI IERRIn ISTARTIn IVALIn IREQON

IC301 (2/2)
ARP

DATA/EMU1   168   32 CDIN1I
BCLK/EMU0   170   34 CDBCKI
LRCK/TDO   175   35 CDLRKI
D OUT   56   31 CDIN21

XARPIT   26 XINT
XARPCS   27 XCS
XWAIT   28 XWAT

33MARP   150 CLKIN

XWRH   24 XWR
XRD   25 XRD

A 0 – 7   2·9   HA 0 – 7   HA 0 – 21   168-169·171-174·176-179·181-184·186-189·191-194   HAD 0 – 21

D 0 – 7   134·141   HD 8 – 15   HD 0 – 15   2 – 5·7 – 10·12 – 15·17 – 20   H DATA 0 – 15

XFRRST

TCK 174   97 TDI
TDI 173   99 TCK
TMS 172   98 TDO
TRST 171   101 TMS
102 TRST

LAND
(FOR J TAG)

XRD   196 HCSn
XWRH   197 HRWn

G OUT 57   Y/G
R OUT 59   CB/R
B OUT 61   CR/B
COMPOUT 65   COMPOUT
Y OUT 55   YOUT
C OUT 63   COUT

Q401
BUFFER   Y_BUFF_CXD

NS705V
VIDEO 1
(SEE PAGE 3-10)

EXCEPT NS705V
DVDO – 7   84·87·89·92   DVDO – 7
D1CLKO 95   27M CLK
VIDEO 1
(SEE PAGE 3-9)

SYSTEM CONTROL
(SEE PAGE 3-7)

HA 0 – 21   HA 0 – 21
HD 0 – 15   HD 0 – 15

NS705V
VREFI 70
RV401
VIDEO LEVEL ADJ

XRST   207 RSTn
512FSAVD   22 ACLK

XAVDCS2   166 HAD23I
XAVDCS3   167 HAD22I

27MAVD   158 CLKI
160 SCLKIN
200 HWAIT0n
XAVDIT   199 HIRQ0n

ACH120 24   ACH12
ACH34O 25   ACH34
ACH56O 26   ACH56
LRCKO 28   LRCK
BCKO 29   BCK
DO 30   LAND
DSPACK0 76   38ACK0
DSPACK1 77   38ACK1

AUDIO 1
(SEE PAGE 3-13)

DM ACK1n
DM RQ1O1n
DM ACK0In
DM RQ0On   202 – 205

DREQ0
DACK0
DREQ1
DACK1

CDDOUT

05

DVP-NS705V/NS755V/NS905V/NS915V

3-4. SYSTEM CONTROL BLOCK DIAGRAM

MB-105 BOARD (3/5)
(SEE PAGE 4-19, 22)

IC106 32M FLASH or IC107 OTP

IC108 1M SRAM

IC104 SYSTEM CONTROL

IC101 EEPROM

IC103 PLL

SIGNAL PROCESSOR (SEE PAGE 3-5)

RF/SERVO (SEE PAGE 3-4)

SIGNAL PROCESSOR (SEE PAGE 3-5)

VIDEO 1 (SEE PAGE 3-10)

VIDEO 1 (SEE PAGE 3-9)

INTERFACE CONTROL (SEE PAGE 3-17)

AUDIO 1 (SEE PAGE 3-13)

HA 0 – 21
HD 0 – 15
HA 1 – 16
A 0 – 15
I/O 0 – 15

XRD XWRH
XRD XWRH XWRL
CSOX

X101 16.5MHz
X102 27MHz

IC104 54: 1.7 Vp-p (16.5 MHz)
IC103 8: 1.5 Vp-p (27 MHz)
IC103 3, 4: 3.5 Vp-p (27 MHz)
IC103 13, 15: 3.2 Vp-p (33.87 MHz)
IC103 9, 10: DVD: 3.3 Vp-p (24.57 MHz) CD: 3.3 Vp-p (22.58 MHz)

XARPIT — 17 INT1
XARPCS — 62 CS4X
XWAIT — 67 XWAIT
XRST — 35 XRST

XRST
XSDPIT — 18 INT2
XSDPCS — 63 CS5X
XDRVMUTE — 48 XDRVMUTE
XLDON — 82 XLDON
CKSW1 — 56 CKSW1/TSW1
OCSW1 — 57 OCSW1/TSW2

XAVDIT — 16 INT0
DREQ0 — 46 DREQ0
DACK0 — 47 DACK0
DREQ1 — 49 DREQ1
DACK1 — 50 DACK1
XAVDCS2 — 60 CS2X
XAVDCS3 — 61 CS3X

XFRRST

SDA 38 — 5 SDA
SCL 39 — 6 SCL
WP 7 — 7 WP

EXT/DSEL 42 — EXT/DSEL
RGBSEL 37 — RGBSEL
EUROVY 41 — EUROVY — IP_SW
AN3 15
WIDE 36 — WIDE — SCL SDA XRST

SIO 25 — SIO — 12 SIO
SOO 26 — SOO — 13 SOO
SCO 27 — SCO — 14 SCO
XIFCS 51 — XIFCS — 11 XIFCS
INT4 20 — IFBSY — 10 IFBSY
XFRRST 76 — XFRRST — 9 XFRRST
MA_MUTE 83 — MA_MUTE
X38CS 80 — X38CS
SI1 28 — SI1
SO1 29 — SO1
SC1 30 — SC1
XDACS 79 — XDACS
INT5 21 — X38IT
INT6 22 — CMDREQ
XSARST 40 — XSARST
XSACS 8 — XSACS
SMUTE 78 — SMUTE
DVD/SACD 33 — DVD/SACD
INT7 23 — XSARDY

XRST

EXCEPT NS705V
CN101

48/44.1k 81

14 FSEL
7 XTI
8 XTO

512-2OUT 9 — 512FS8CH
512-1OUT 10 — 512FS38
27-2OUT 4
27-1OUT 3 — 27M38
33-1OUT 15
33-2OUT 13 — 33MSA

33MARP
27MAVD
512FSAVD

3-7
3-8
05

3-5. VIDEO (1) BLOCK DIAGRAM

DVP-NS705V/NS755V/NS905V/NS915V

3-6. VIDEO (2) BLOCK DIAGRAM

AV-64 BOARD (1/2)
(SEE PAGE 4-39)

* IC103 36 pin : EXCEPT AEP, UK, RUS
24 pin : AEP, UK, RUS

IC103
VIDEO BUFFER

J102 (1/2)

EXCEPT AEP, UK, RUS

VIDEO 1

VIDEO 2   AEP, UK, RUS   LINE OUT

VIDEO

IC103 ㉑ : AEP, UK, RUS
㉝ : EXCEPT AEP, UK, RUS

2.4 Vp-p (H)

IC103 ⑰ : AEP, UK, RUS
㉙ : EXCEPT AEP, UK, RUS

2.0 Vp-p (H)

• Abbreviation
RUS : Russian

CN301 (1/3)

V   19   V   ③ VIDEO IN   VIDEO OUT   ㉑ AEP, UK, RUS
㉝ EXCEPT AEP, UK, RUS

Y   23   Y   ⑧ Y IN   Y OUT   ⑰ AEP, UK, RUS
㉙ EXCEPT AEP, UK, RUS

C   21   C   ⑥ C IN   C OUT   ⑲ AEP, UK, RUS
㉛ EXCEPT AEP, UK, RUS

⑦ MUTE1

IC103 ㉔ : EXCEPT AEP, UK, RUS

2.0 Vp-p (H)

J101

Y   C   1

S VIDEO OUT

Y   C   2

IC103 ⑲ : AEP, UK, RUS
㉛ : EXCEPT AEP, UK, RUS

1.8 Vp-p (H)

⑯ MUTE2

VIDEO 1
(SEE PAGE 3-10)

Y/G   25   Y   ⑫ Y IN   Y OUT ㉔

Cb/R   27   Cb   ⑮ Cb IN   Cb OUT ㉒

Cr/B   29   Cr   ⑰ Cr IN   Cr OUT ㉒⓪

J103

Y

PB   COMPONENT VIDEO OUT

PR

WIDE   28   Q104, 105 WIDE SWITCH

IC103 ㉙
: EXCEPT AEP, UK, RUS

IC103 ㉒
: EXCEPT AEP, UK, RUS

1.3 Vp-p (H)   1.3 Vp-p (H)

IP_SW   16

VMUTE   11

CN302 (1/2)

INTERFACE CONTROL
(SEE PAGE 3-17)   V_MUTE   1

NS755V/NS915V

+5V   S101
SCAN SELECT
SELECTABLE
INTERLACE
PROGRESSIVE

ER-19 BOARD
(SEE PAGE 4-53)

NS705V/NS905V:AEP, UK, RUS

NS905V:AEP,UK,RUS

RY903

⑥ ③
⑤
⑦
⑧ ⑩
①

Q914 RELAY DRIVE

IC901 ㉙

2.4 Vp-p (H)

IC901 ㉙
(LINE : S VIDEO mode)

2.0 Vp-p (H)

RY901

⑦ ⑩
⑧
⑥
⑤ ③
①

Q912 RELAY DRIVE

V IN   ⑳
V/Y OUT   ⑲
BLANKING OUT   ⑯
R/C OUT   ⑮
G OUT   ⑪
FUNCTION SW OUT   ⑧
B OUT   ⑦
AVLINKO
A(L)IN   ⑥
A(L)OUT   ③
A(R)IN   ②
A(R)OUT   ①

CNJ902 LINE 1 (RGB) –TV

IC901
VIDEO BUFFER, SELECT SWITCH

CN901

V   1   ⑬ V IN

Y   5   Q911 BUFFER   ⑮ Y IN

C   3   ⑤ C IN

R   9   ⑦ R IN

G   7   ⑨ G IN

B   11   ⑪ B IN

V/Y OUT ㉕   V/Y

R/C OUT �34   R/C

G OUT ㉙   G

B OUT ㉗   B

㉝ MUTE1
㉔ MUTE3
㉘ MUTE2

VMUTE   12   D907

EUROVY   19   ㉚ SW1
⑫ SW2

IC901 ㉙
(LINE : RGB mode)

IC901 �34
(LINE : RGB mode)

1.4 Vp-p (H)   1.4 Vp-p (H)

IC901 ㉗
(LINE : RGB mode)

IC901 �34
(LINE : S VIDEO mode)

1.4 Vp-p (H)   1.7 Vp-p (H)

VIDEO 1
(SEE PAGE 3-10)

RY902

⑦ ⑩
⑧
⑥
⑤ ③
①

V IN   ⑳
V OUT   ⑲
BLANKING IN   ⑯
R IN   ⑮
G IN   ⑪
FUNCTION SW IN   ⑧
B IN   ⑦
AVLINKI
A(L)IN   ⑥
A(L)OUT   ③
A(R)IN   ②
A(R)OUT   ①

CNJ901 LINE 2

Q913 RELAY DRIVE

RY904

⑥ ③
⑤
⑦
⑧ ⑩
①

WIDE   13   Q906 – 908 FUNCTION SIGNAL GENERATOR

DISCEXT   15   Q909, 910 LINE SELECT CONTROL

Q915 RELAY DRIVE

RGBSEL   21   Q901 – 903 BLANKING SIGNAL GENERATOR

NS705V

V/Y OUT   ⑲
BLANKING OUT   ⑯
R/C OUT   ⑮
G OUT   ⑪
FUNCTION SW OUT   ⑧
B OUT   ⑦
A (L) OUT   ③
A (R) OUT   ①

CNJ902 LINE 1 (RGB) –TV

ERAUDIOL   20

ERAUDIOR   17

05

3-7. AUDIO (1) BLOCK DIAGRAM

MB-105 BOARD (5/5)
(SEE PAGE 4-27, 29, 31)

CN501 (1/3)

SIGNAL PROCESSOR (SEE PAGE 3-6)

CDDOUT — (10) DSP1DII
(32) DSP2DII IC501 DSP2DO (45) — SPDIF
ACH12 — (160) DSP1CH12I AUDIO DSP
(56) DSP2CH12I
ACH34 — (159) DSP1CH34I DSP2CH780 (51)
(57) DSP2CH34I IC501 ⑩, ⑩
ACH56 — (158) DSP1CH56I
(58) DSP2CH56I
LRCK — (161) DSP1LRCKI 4.1 Vp-p (3.1 MHz)
(55) DSP2LRCKI IC501 ⑧, ㉓, ㉗, ⑩
BCK — (147) DSP1BCKI
(69) DSP2BCKI
38ACK0 — (4) DSP1ACK00
38ACK1 — (3) DSP1ACK01 DVD: 3.3 Vp-p (24.57 MHz)
512FS38 — (149) DSP1ACKI CD: 3.3 Vp-p (22.58 MHz)
(8) DSP1DIACKI (NC) IC501 ㉒
(67) DSP2ACKI
(34) DSP2DIACKI (NC)
27M38 — (22) SCLKI
X38IT — (107) CMD ACKNO 3.5 Vp-p (27 MHz)
CMDREQ — (108) CMD REQNO
X38CS — (118) SH CSNI

CN602 (2/3)
SDTI/DSDL (3) IC504 AOUTL+ (16) — 24 — ALT+
AUDIO D/A CONVERTER AOUTL– (15) — 23 — ALT–
BICK/DCLK (2) IC504 ④ AOUTR+ (14) — 28 — ART+
LRCK/DSDR (4) AOUTR– (13) — 29 — ART–
MCLK (1)
CSN (6)
PDN (5) DVD: 4.3 Vp-p (48.1 kHz)
DSDM (12) CD: 4.3 Vp-p (44.1 kHz)
DSDL (10) IC504 ①
DSDR (11)
DCLK (9)
CCLK (7) DVD: 3.3 Vp-p (24.57 MHz)
CDTI (8) CD: 3.3 Vp-p (22.58 MHz)

IC501 ㊸ DVD: 4.4 Vp-p (3.1 MHz) CD: 4.4 Vp-p (2.8 MHz)
IC504 ② DVD: 4.4 Vp-p (3.1 MHz) CD: 4.4 Vp-p (2.9 MHz)
IC501 ㊷ DVD: 4.3 Vp-p (48.1 kHz) CD: 4.3 Vp-p (44.1 kHz)
IC504 ⑨ 4 Vp-p (2.84 MHz)

SH CSNI (118)
SH SOO (119) SI1 SO1
SH SII (117) SC1
SH CLKI (115)

XRST — (6) RESET NI
TRST (142)

DSP2BCKO (43) — BICK (9) IC502 ⑰
DSP2LRCKO (42) — LRCK (17)
DSP2CH120 (48) — SDTI1 (14) DVD: 4.3 Vp-p (48.1 kHz)
DSP2CH340 (49) — SDTI2 (15) CD: 4.3 Vp-p (44.1 kHz)
DSP2CH560 (50) — SDTI3 (16)

IC502 ⑨ DVD: 4.4 Vp-p (3.1 MHz) CD: 4.4 Vp-p (2.9 MHz)

DZFR (19)
DZFL (20)

SYSTEM CONTROL (SEE PAGE 3-8)
SI1
SO1
SC1

XDACS — CSN (21)
512FS8CH — MCLK (10) IC502 ⑩
DVD/SACD — DSDM (22)
MA_MUTE
33MSA
XSACS
SMUTE
XSARST DVD: 3.3 Vp-p (24.57 MHz)
XSARDY CD: 3.3 Vp-p (22.58 MHz)

PDN (8)
CCLK (19) IC502 AUDIO D/A CONVERTER
CDTI (20)
SC1 SO1

CN501 (2/3)
LOUT1+ (2) — 11 — FL+
LOUT1– (1) — 10 — FL–
ROUT1+ (48) — 13 — FR+
ROUT1– (47) — 14 — FR–
LOUT2+ (46) — 6 — SL+
LOUT2– (45) — 5 — SL–
ROUT2+ (44) — 7 — SR+
ROUT2– (43) — 8 — SR–
LOUT3+ (42) — 2 — C+
LOUT3– (41) — 1 — C–
ROUT3+ (40) — 3 — SW+
ROUT3– (39) — 4 — SW–

AUDIO 2 (SEE PAGE 3-15)

IC905 ⑪ DVD: 3.3 Vp-p (24.57 MHz) CD: 3.3 Vp-p (22.58 MHz)

SI1 (6) MSDATO
SO1 (4) MSDATI
SC1 (3) MSCK
(7) MSREADY
(9) XRST
(10) SMUTE
(2) XMSLAT
(11) MCKI

PHREFO (62) — DCLK (23)

IC503
DZFL1 (3) 1 NS705V/ NS905V : AEP, UK, RUS
2 7
DZFR1 (4) 5 3
EXCEPT NS705V/ NS905V : AEP, UK, RUS
6

D501 CN602 (3/3) 21 — LMUTE
D502 22 — RMUTE

DZF23 (5) D503 CN501 (3/3) 17 — MA_6CH_MUTE

SIGNAL PROCESSOR (SEE PAGE 3-6)

XFRRST — (31) TRST
TMS — (30) TMS
TCK — (26) TCK
IC905 SACD DECODER
DSADML (55) — DSDL1 (25)
DSADMR (56) — DSDR1 (26)
DSAL (64) — DSDL2 (27)
DSAR (66) — DSDR2 (28)
DSAC (69) — DSDL3 (29)
DSASW (71) — DSDR3 (30)
DSALS (74)
DSARS (76)

SDI 0 – 7 — (169) SD 0 – 7 IC903 16M SDRAM
(176)
XSRQ — (164) XSRQ 148·149· 151·152· 154 – 157 159 – 162 A 0 – 11
XSHD — XSHD
SDCK — SDCK
XSAK — (168) XSAK
SDEF — SDEF
COLRCK/TDOKT — (27) TDI
TDOSA — (29) TDO 131 – 134· 136 – 139 DQ 0 – 7
PCLK — (123) WCK IC905 ⑱
SIGO — 3 ▷ 1 — (126) WARFI 4.5 Vp-p (4.2 MHz) DCLK, DCKE, XWES, XCAS, XRAS
IC906
RF/SERVO (SEE PAGE 3-4)

IC905 ⑲ 4.9 Vp-p (33.78 MHz)

• Abbreviation
  RUS : Russian

05

3-13

3-14

DVP-NS705V/NS755V/NS905V/NS915V

3-8. AUDIO (2) BLOCK DIAGRAM

AV-64 BOARD (2/2)
(SEE PAGE 4-41, 43)

3-9. INTERFACE CONTROL BLOCK DIAGRAM

DVP-NS705V/NS755V/NS905V/NS915V

3-10. POWER (1) BLOCK DIAGRAM

3-11. POWER (2) BLOCK DIAGRAM

AV-64 BOARD
(SEE PAGE 4-39 to 4-44)

MB-105 BOARD
(SEE PAGE 4-25)

• Abbreviation
RUS : Russian

CN302

AI+5V 6

POWER 1
(SEE PAGE 3-20)

AU+11V 5

Q310

SW–13V 7

Q311, 312

EVER+3.3V 3

IC102
–5V REG
2 IN   OUT 3

IC103
VIDEO BUFFER

IC302
+5V REG
1 IN   OUT 3

D303

MUTE V

AUDIO 2
(SEE PAGE 3-15)

IC301
OPTICAL DIGITAL OUT

DIGITAL OUT   OPTICAL

CN301 (2/2)

4

AUDIO+5V

CN301 (1/2)

15   VIDEO+5V
13   VIDEO–5V
14   VIDEO+11V

CN602
15
17
16

CN601
8   +5V
20 –5V
6   +11V

CN901
14
L905
20
16   +11V

IC901
VIDEO BUFFER, SELECT SWITCH

ER-19 BOARD (SEE PAGE 4-53)

NS705V/NS905V:AEP, UK, RUS

IC303
AUDIO AMP

IC201
5.1CH FRONT AUDIO AMP

IC202
5.1CH REAR AUDIO AMP

IC203
5.1CH CENTER/WOOFER AUDIO AMP

MB-105 BOARD
(SEE PAGE 4-11 to 4-32)

CN602
26

IC502
AUDIO D/A CONVERTER

IC504
AUDIO D/A CONVERTER

IC503
OR

FL501
FILTER

FL502
FILTER

IC501
AUDIO DSP

CN101

3.3V MNT 8

POWER 1
(SEE PAGE 3-20)

SW+3.3V 7

FL108
FILTER

+5V 5

FL103
FILTER

+1.8V 3

FL104
FILTER

+11V 1

FL107
FILTER

IC202
FOCUS/TRACKING COIL DRIVE, SPINDLE/SLED/LOADING MOTOR DRIVE

FL109
FILTER

IC108
1M SRAM

FL106
FILTER

IC104
SYSTEM CONTROL

FL102
FILTER

IC101
EEPROM

FL105
FILTER

IC106
32M FLASH   or   IC107
OTP

EXCEPT NS705V

IC102
+3.3V REG
5 VIN   VOUT 4

FL101
FILTER

NS705V

IC103
PLL

FL905
FILTER

IC906
AMP

FL404
FILTER

IC406
64M SDRAM

FL403
FILTER

NS705V

IC402
+3.3V REG
5 VIN   VOUT 4

IC401
+1.8V REG
5 VIN   VOUT 4

FL402
FILTER

IC403
AV DECODER

CN204
5   LED

INLIMIT SENSOR

FL201
FILTER

CN203
19 VCC
11 MOD

OPTICAL DEVICE

EXCEPT NS705V

IC605
+2.5V REG
5 VIN   VOUT 4

IC604
VIDEO ENCORDER

FL901
FILTER

FL903
FILTER

IC905
SACD DECODER

IC901
+2.5V REG
6 VIN   VOUT 4

IC603
16M SDRAM

IC601
+2.5V REG
5 VIN   VOUT 4

IC602
I/P CONVERTER

FL902
FILTER

IC903
16M SDRAM

NS755V/NS915V

IC201
DVD/CD RF AMP, DIGITAL SERVO

IC303
16M DRAM

IC302
+3.3V REG
5 VIN   VOUT 4

IC301
ARP, SERVO DSP

05

SECTION 4
PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.

For printed wiring boards:
- ○———— : indicates a lead wire mounted on the component side.
- ●———— : indicates a lead wire mounted on the printed side.
- ○ : Through hole.
- ▨▨▨ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Side A)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side B)	Parts on the parts face side seen from the parts face are indicated.

For schematic diagram:
- Caution when replacing chip parts.
  New parts must be attached after removal of chip.
  Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
- All resistors are in ohms, $^1/_4$ W (Chip resistors : $^1/_{10}$ W) unless otherwise specified.
  kΩ : 1000Ω, MΩ : 1000kΩ.
- All capacitors are in μF unless otherwise noted. pF : μμF
  50V or less are not indicated except for electrolytics and tantalums.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⊞ : nonflammable resistor.
- ⊞•• : fusible resistor.
- ▭ : panel designation.
- △ : internal component.
- ▭ : adjustment for repair.
- **B +** : B+ Line.
- **B −** : B− Line.
- Circled numbers refer to waveforms.
- Voltages are dc between measurement point.
- Readings are taken with a color-bar signal on DVD reference disc and when playing CD reference disc.
- Readings are taken with a digital multimeter (DC 10MΩ).
- Voltage variations may be noted due to normal production tolerances.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Abbreviation
  AUS : Australian model
  CND : Canadian model
  EA : Saudi Arabia model
  HK : Hong Kong model
  IA : Indonesia model
  KR : Korean model
  LA : Latin-American model
  ME : Middle East model
  MY : Malaysia model
  NZ : New Zealand model
  PH : Philippines model
  RUS : Russian model
  SP : Singapore model
  TH : Thailand model
  TW : Taiwan model
  VTM : Vietnam model

DVP-NS705V/NS755V/NS905V/NS915V

4-1. FRAME SCHEMATIC DIAGRAM

HS12S1U BOARD
(NS755V/NS915V:TW)

HS12S1F BOARD
(NS915V:LA)

ETXNY393N2F BOARD
(NS705V/NS905V/NS915V
:HK,SP, MY, TH, PH, IA, VTM, KR)

LE-34 BOARD

BASE UNIT
KHM-270AAA/SERVICE ASSY

OPTICAL DEVICE

MS-81 BOARD

IF-94 BOARD

AV-64 BOARD

MB-105 BOARD

ER-19 BOARD

AEP,UK,RUS

FFC (FLE-001)
FFC (FMO-001)
FFC (FMO-002)
FFC (FMM-035)
FFC (FMA-034)
FFC (FMA-033)
FFC (FAE-009)

HARNESS (PF-130)
HARNESS (AF-123)

DOWNLOAD (JIG)

CURSOR STICK

PUSH ENTER

SPINDLE MOTOR
INLIMIT SWITCH
SLED MOTOR
LOADING MOTOR

B to B

FRAME

4-3
4-4

4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

MS-81 (LOADING) PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM
– Ref. No.: MS-81 board; 1,000 series –

There are a few cases that the part isn't mounted in this model is printed on this diagram.

⚡ : Uses unleaded solder.

MS-81 BOARD

MS-81 BOARD

Power Block
(ETXNY393N2F (NS705V/NS905V/NS915V: HK, SP, MY, TH, PH, IA, VTM, KR))
(HS12S1U (NS755V/NS915V: TW))
(HS12S1F (NS915V: LA))
(SWITCHING REGULATOR)

ER-19
(NS705V/NS905V: AEP, UK, RUS)
(EURO AV)

AV-64
(AUDIO/VIDEO OUT)

LE-34
(LED)

MS-81
(LOADING)

MB-105
(SIGNAL PROCESS, SERVO)

IF-94
(INTERFACE CONTROL)

LOADING
MS-81
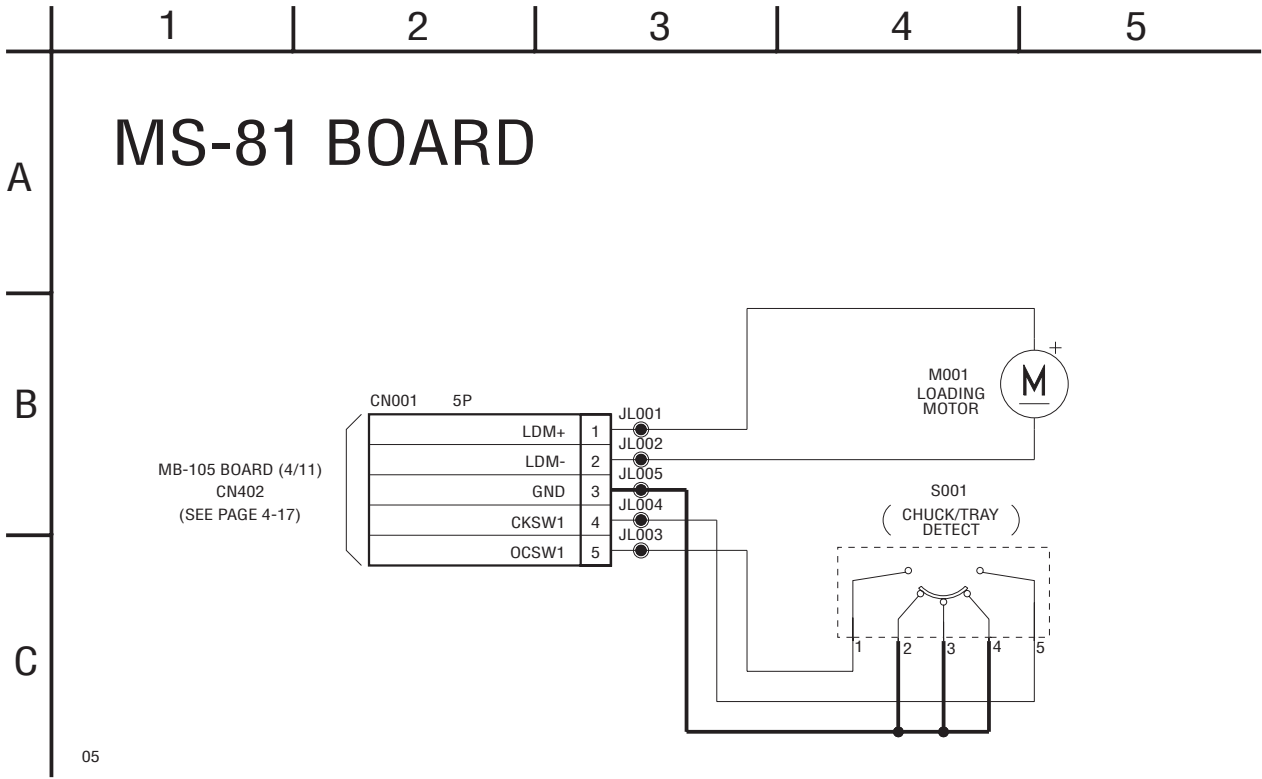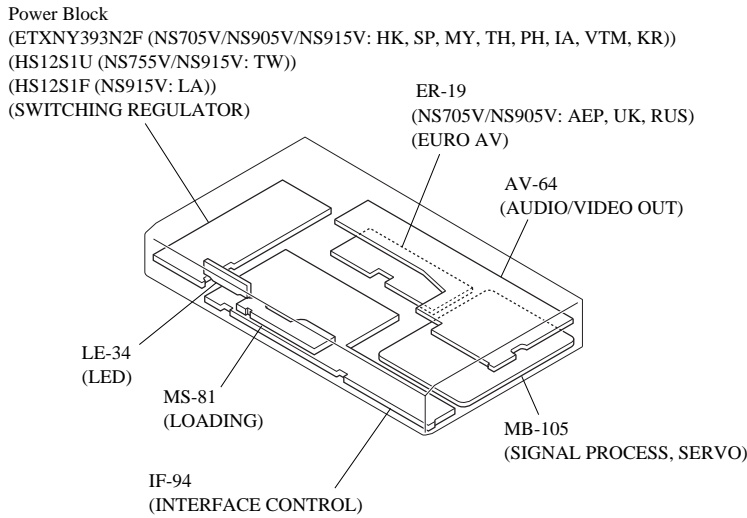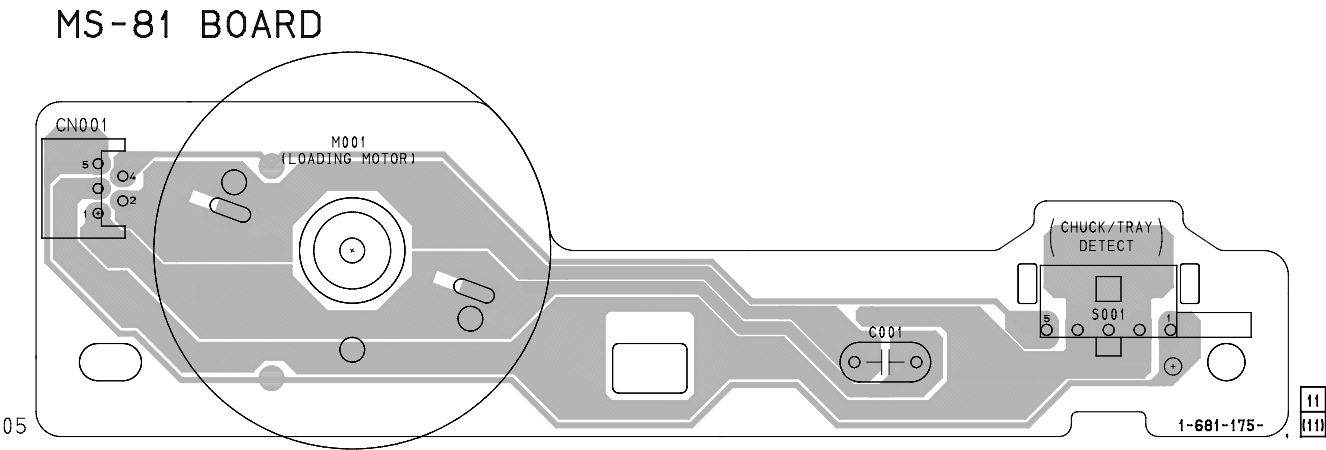
MB-105 (SIGNAL PROCESS, SERVO) PRINTED WIRING BOARD

– Ref. No.: MB-105 board; 2,000 series –

🔲 : Uses unleaded solder.

There are a few cases that the part isn't mounted in this model is printed on this diagram.

MB-105 BOARD (SIDE A)

CN101	E-1
CN104	G-1
CN203	A-5
IC104	H-3
IC301	D-4
IC302	D-2
IC401	E-7
IC403	G-8
IC501	H-13
IC604	D-12
IC605	E-14
IC905	C-8
IC906	B-6
Q601	E-11

MB-105 BOARD (SIDE A)

Power Block
(ETXNY393N2F (NS705V/NS905V/NS915V: HK, SP, MY, TH, PH, IA, VTM, KR))
(HS12S1U (NS755V/NS915V: TW))
(HS12S1F (NS915V: LA))
(SWITCHING REGULATOR)

ER-19
(NS705V/NS905V: AEP, UK, RUS)
(EURO AV)

AV-64
(AUDIO/VIDEO OUT)

LE-34
(LED)

MS-81
(LOADING)

IF-94
(INTERFACE CONTROL)

MB-105
(SIGNAL PROCESS, SERVO)

SIGNAL PROCESS, SERVO
MB-105

MB-105 BOARD (SIDE B)

MB-105 BOARD (SIDE B)
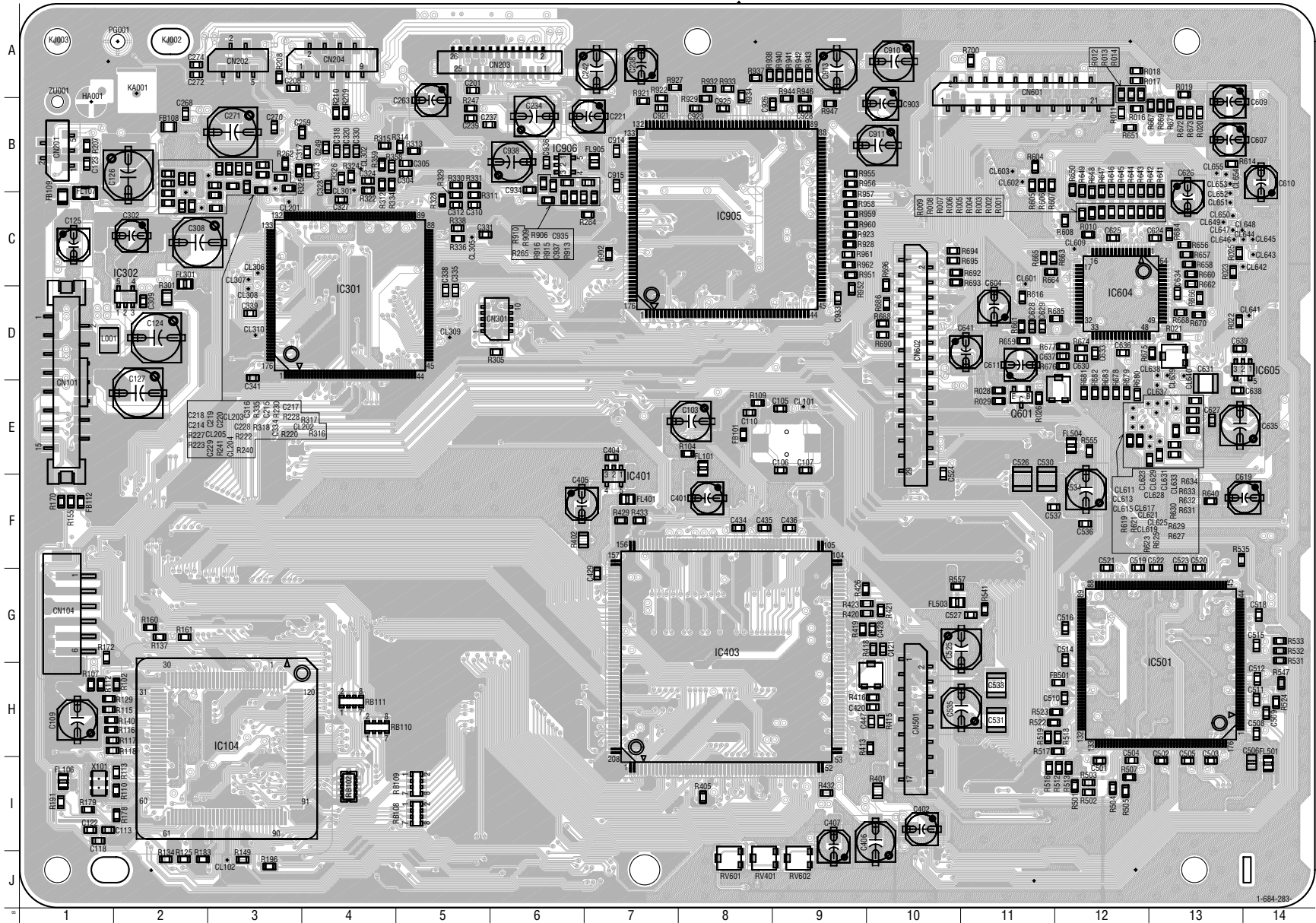
D501	E-10
D502	E-10
D503	F-10
IC101	H-1
IC102	E-8
IC103	E-9
IC106	I-3
IC108	H-8
IC201	B-6
IC202	B-3
IC303	D-2
IC402	I-10
IC406	G-8
IC502	H-11
IC503	F-11
IC504	F-12
IC601	B-14
IC602	C-12
IC603	E-13
IC901	A-10
IC903	C-8
Q201	B-7
Q202	B-7
Q401	I-10

NS755V/
NS905V : EA, ME, AUS/
NS915V
NS705V/NS905V :
AEP, UK, RUS

1-684-28?

SIGNAL PROCESS, SERVO

MB-105

MB-105 (RF AMP, SERVO) SCHEMATIC DIAGRAM • **See page 4-7 for printed wiring board.**

– Ref. No.: MB-105 board; 2,000 series –

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MB-105 BOARD (1/11)

NO MARK:PB MODE

BASE UNIT KHM-270AAA/ SERVICE ASSY

OPTICAL DEVICE

DVD/CD PD IN

DVD/CD LD MODULE

FOCUS COIL

TRACKING COIL

SLED MOTOR

INLIMIT SW

SPINDLE MOTOR

IC201
SERVO ERROR PROCESS
IC201
SP3728ACB

SIGNAL PATH

	VIDEO SIGNAL	AUDIO SIGNAL
	Y/CHROMA	
PB		

SPINDLE SERVO(SPEED AND PHASE)
TRACKING SERVO DVD/CD CDV
SLED SERVO DVD/CD
FOCUS SERVO
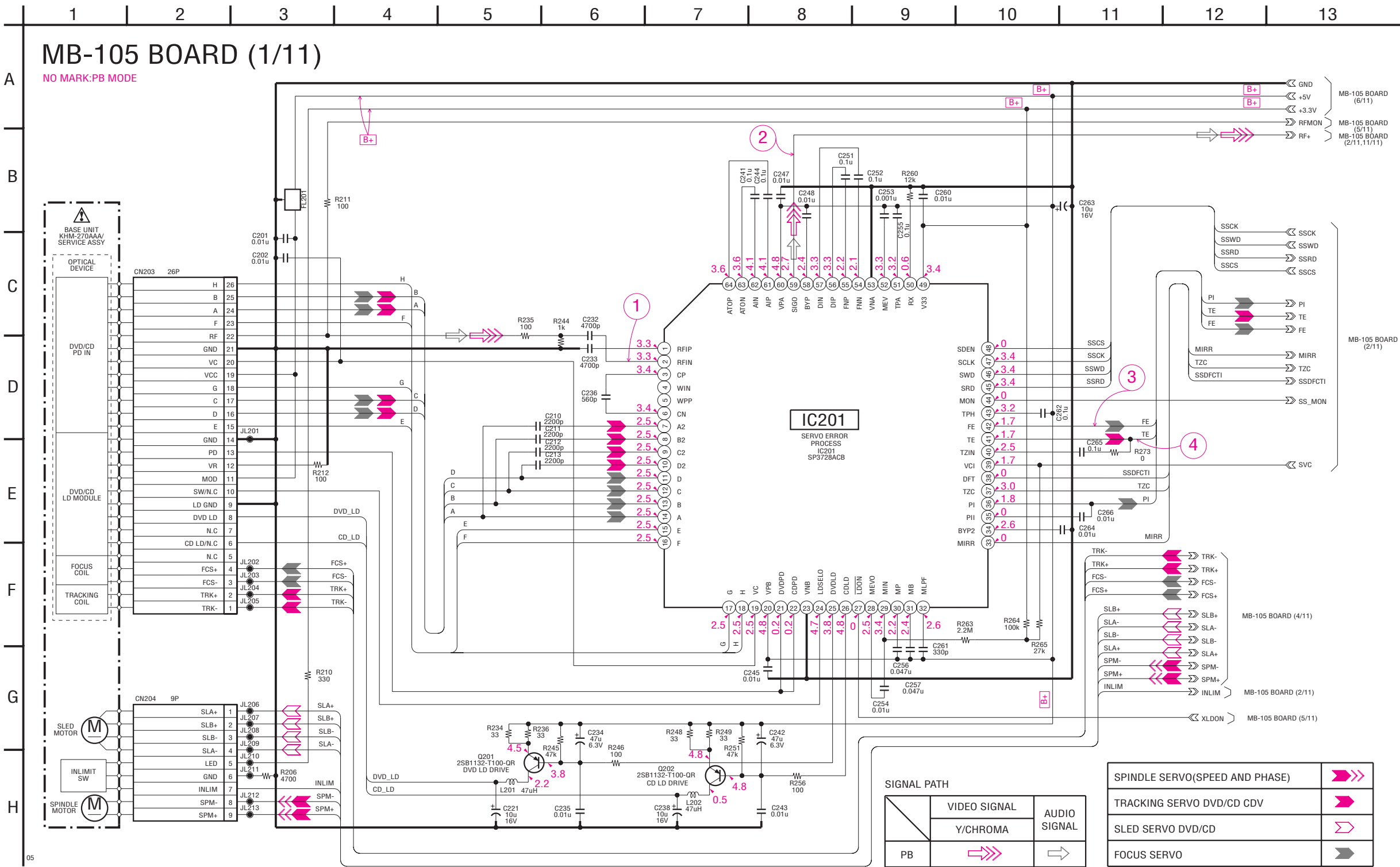
• **Waveforms**

❶ IC201 ② (DVD play) 200 mV/DIV 50 ns/DIV — 570 mVp-p
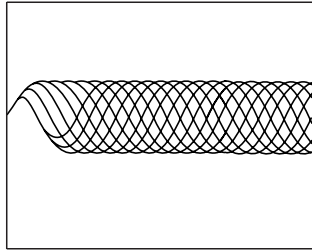
❶ IC201 ② (CD play) 200 mV/DIV 200 ns/DIV — 550 mVp-p
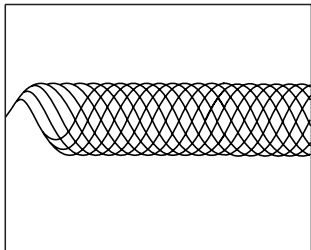
❷ IC201 ㊾ (DVD play) 500 mV/DIV 50 ns/DIV — 1.4 Vp-p
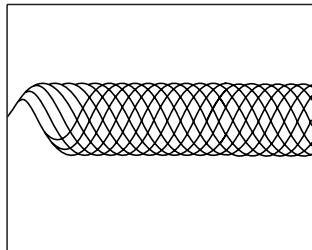
❷ IC201 ㊾ (CD play) 500 mV/DIV 200 ns/DIV — 1.4 Vp-p
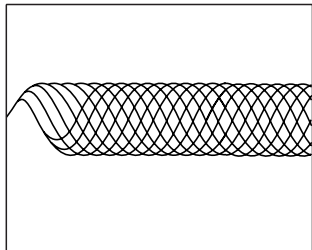
❸ IC201 ㊷ (DVD play) 100 mV/DIV 50 ms/DIV — 180 mVp-p
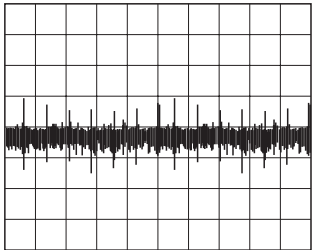
❸ IC201 ㊷ (CD play) 500 mV/DIV 50 ms/DIV — 860 mVp-p
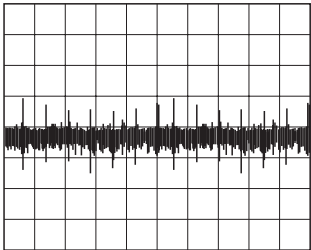
❹ IC201 ㊶ (DVD play) 500 mV/DIV 50 ms/DIV — 1.5 Vp-p

❹ IC201 ㊶ (CD play) 500 mV/DIV 200 ms/DIV — 1.7 Vp-p

RF AMP, SERVO
MB-105 (1/11)
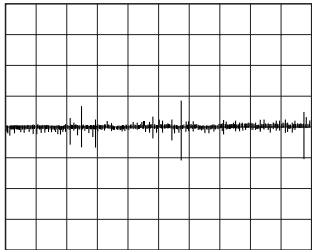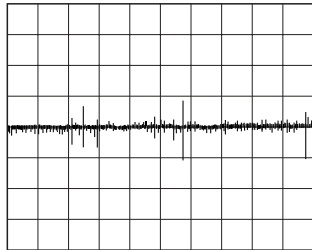
MB-105 (ARP, SERVO DSP) SCHEMATIC DIAGRAM • See page 4-7 for printed wiring board.
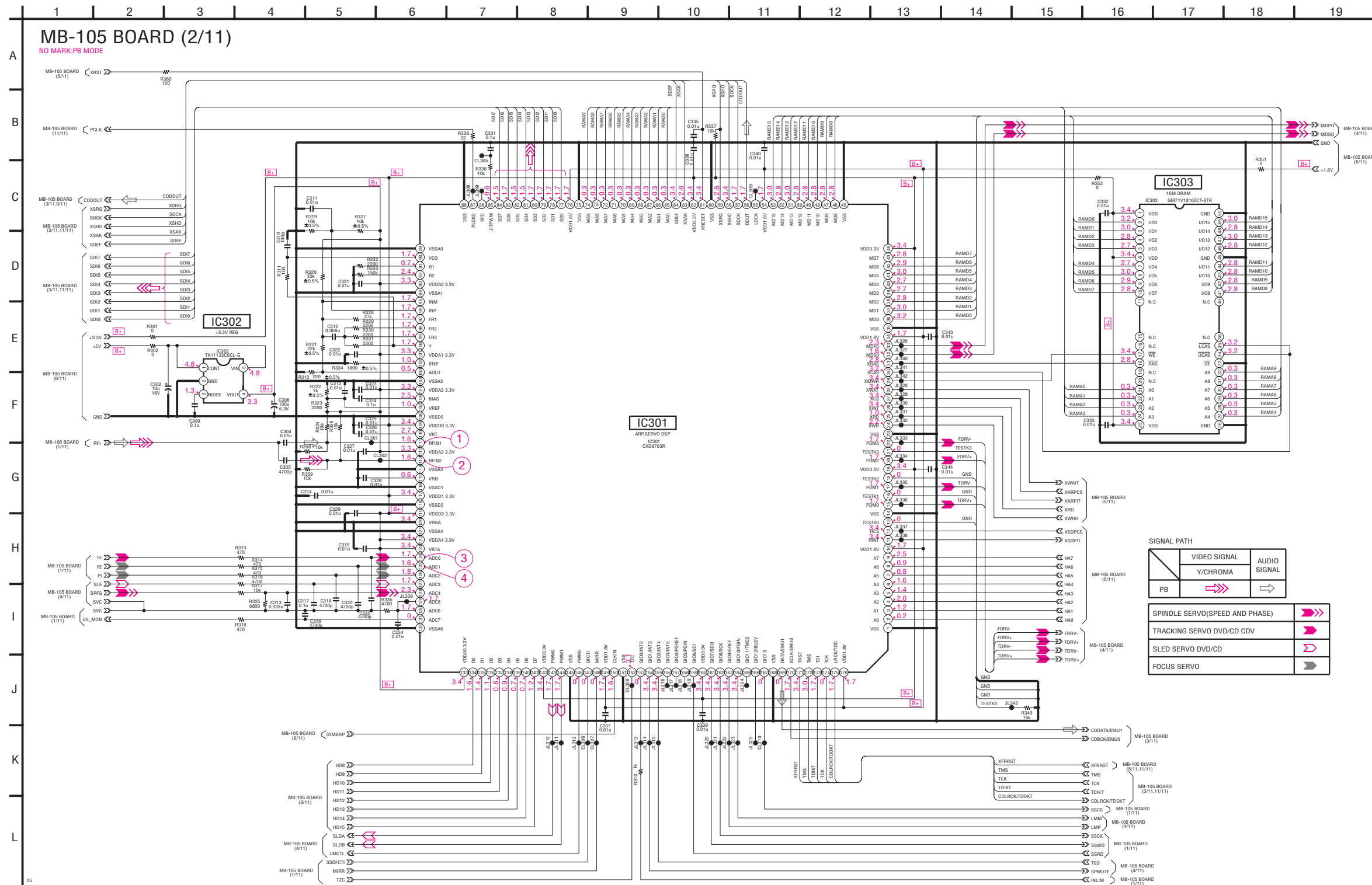
– Ref. No.: MB-105 board; 2,000 series –

MB-105 BOARD (2/11)

NO MARK:PB MODE

IC302
+3.3V REG

IC301
ARP;SERVO DSP
IC301
CXD9703R

IC303
16M DRAM
GM71V18160CT-6TR

SIGNAL PATH

	VIDEO SIGNAL	AUDIO SIGNAL
	Y/CHROMA	
PB		

SPINDLE SERVO(SPEED AND PHASE)
TRACKING SERVO DVD/CD CDV
SLED SERVO DVD/CD
FOCUS SERVO

• Waveforms

❶ IC301 ⑪ (DVD play)
500 mV/DIV 100 ns/DIV
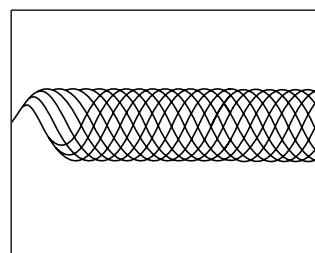
1.4 Vp-p

❷ IC301 ⑪ (CD play)
500 mV/DIV 200 ns/DIV
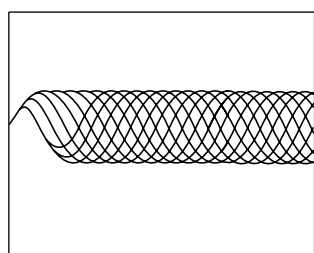
1.4 Vp-p

❸ IC301 ⑬ (DVD play)
500 mV/DIV 50 ms/DIV
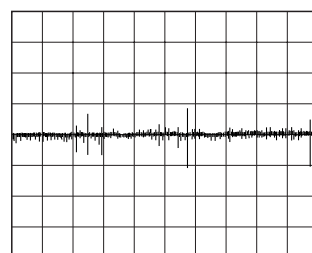
1.4 Vp-p

❸ IC301 ⑬ (CD play)
500 mV/DIV 200 ms/DIV
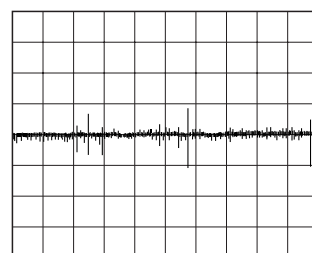
1.7 Vp-p

❹ IC301 ⑮ (DVD play)
100 mV/DIV 50 ms/DIV

160 mVp-p

❹ IC301 ⑮ (CD play)
500 mV/DIV 50 ms/DIV

860 mVp-p

ARP, SERVO DSP
MB-105 (2/11)
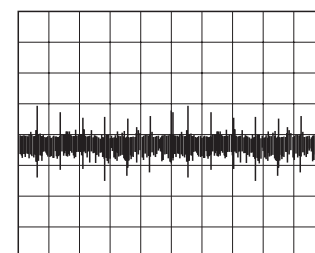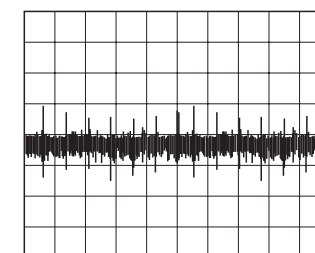
MB-105 (AV DECODER) SCHEMATIC DIAGRAM • See page 4-7 for printed wiring board.

– Ref. No.: MB-105 board; 2,000 series –

MB-105 BOARD (3/11)

NO MARK:PB MODE

MB-105 (MOTOR DRIVE) SCHEMATIC DIAGRAM • See page 4-7 for printed wiring board.

– Ref. No.: MB-105 board; 2,000 series –
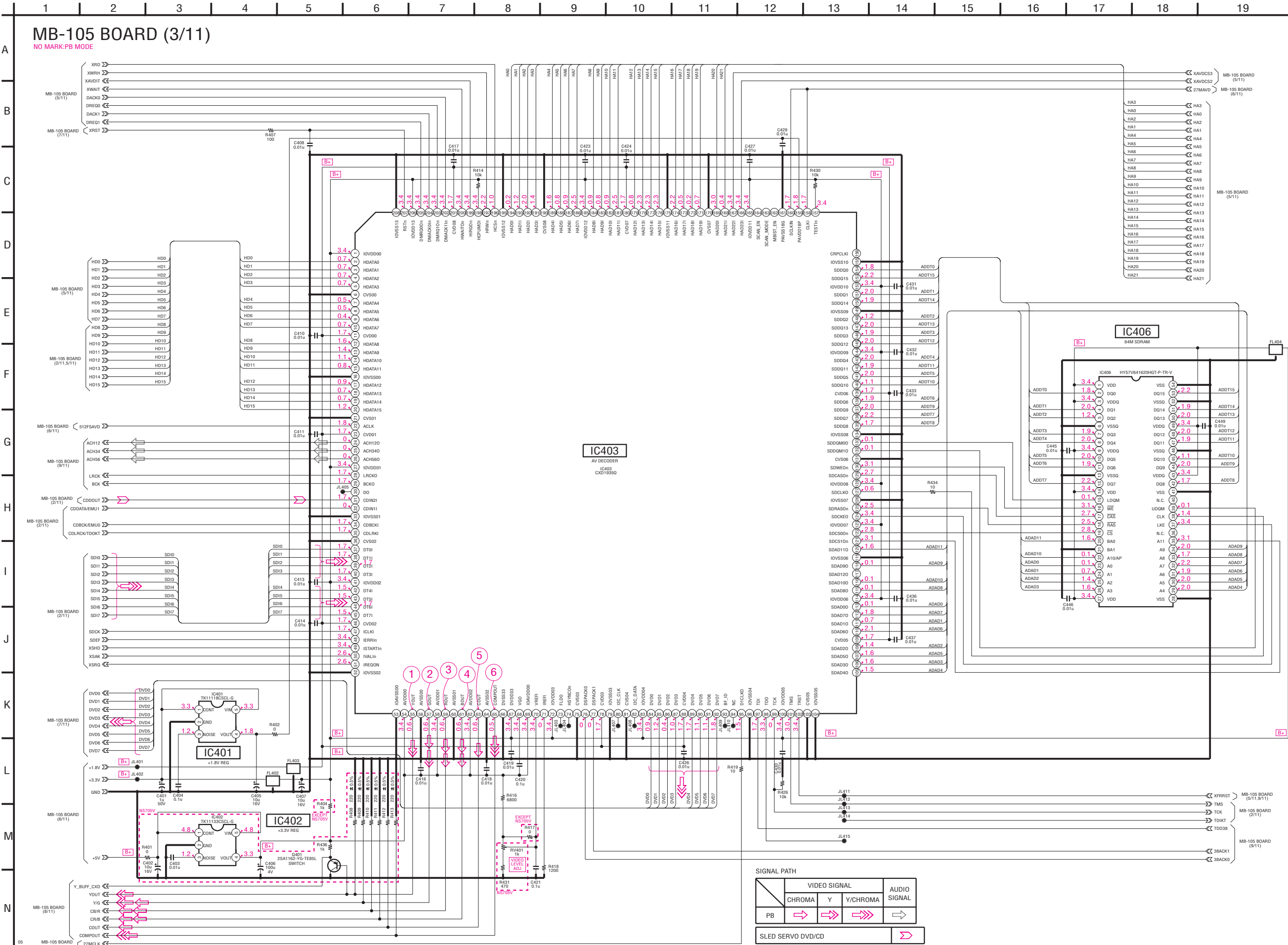
MB-105 BOARD (4/11)

NO MARK:PB MODE
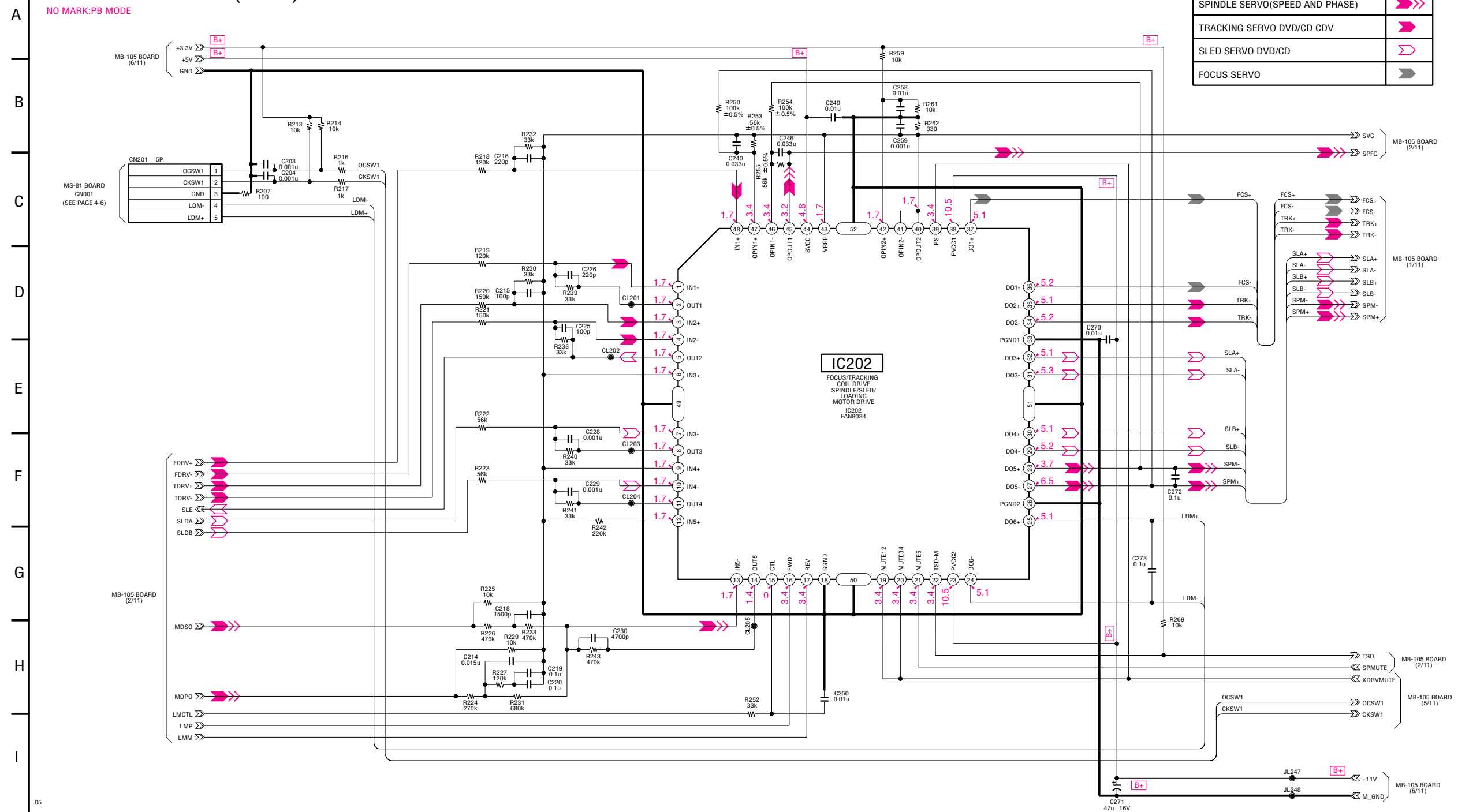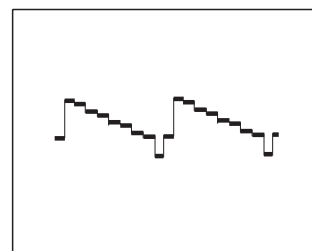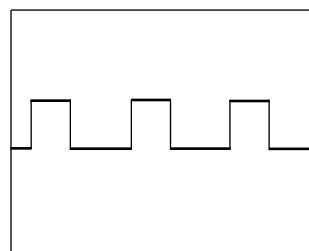
SIGNAL PATH

SPINDLE SERVO(SPEED AND PHASE)	
TRACKING SERVO DVD/CD CDV	
SLED SERVO DVD/CD	
FOCUS SERVO	

IC202
FOCUS/TRACKING
COIL DRIVE
SPINDLE/SLED/
LOADING
MOTOR DRIVE
IC202
FAN8034

• Waveforms

❶ IC403 ㊺

940 mVp-p (H)

❷ IC403 ㊼ : NS705V

660 mVp-p (H)

❸ IC403 ㊾ : NS705V

660 mVp-p (H)

❹ IC403 ㊿ : NS705V

660 mVp-p (H)

❺ IC403 ㊿

810 mVp-p (H)

❻ IC403 ㊿

1.1 Vp-p (H)

MOTOR DRIVE
MB-105 (4/11)

DVP-NS705V/NS755V/NS905V/NS915V

MB-105 (SYSTEM CONTROL) SCHEMATIC DIAGRAM • See page 4-7 for printed wiring board.

– Ref. No.: MB-105 board; 2,000 series –

MB-105 BOARD (5/11)

XX MARK:NO MOUNT
NO MARK:PB MODE

• Waveform

❶ IC104 ⑤④
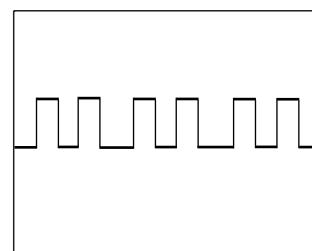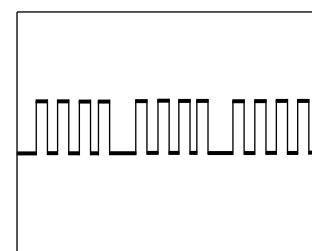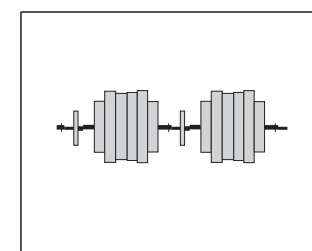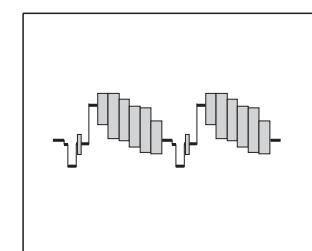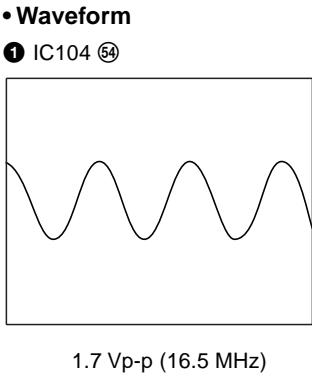
1.7 Vp-p (16.5 MHz)

MB-105 (CLOCK GENERATOR) SCHEMATIC DIAGRAM • **See page 4-7 for printed wiring board.**

– Ref. No.: MB-105 board; 2,000 series –

• **Waveforms**

MB-105 BOARD (6/11)

NO MARK:PB MODE
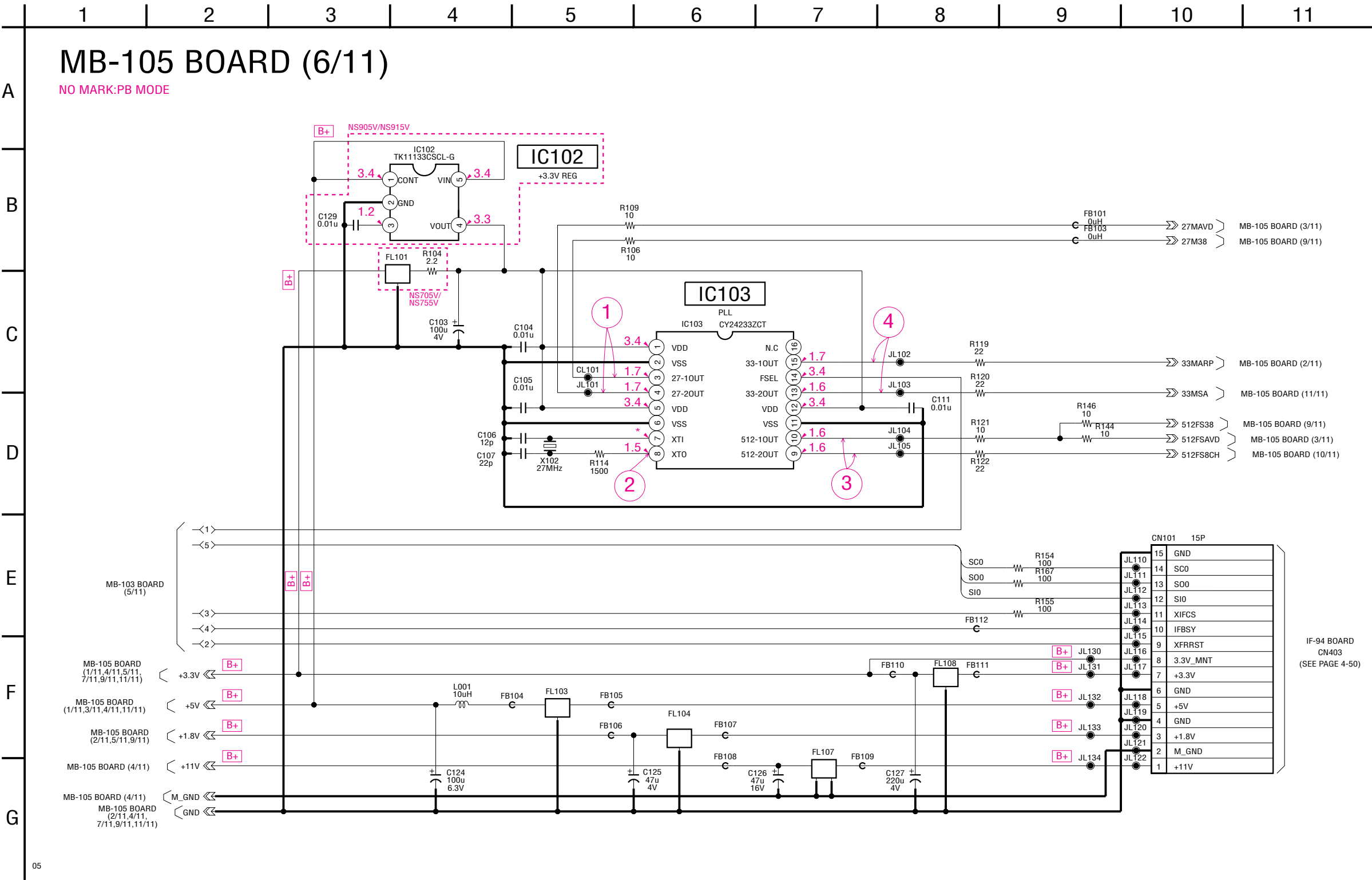
❶ IC103 ③, ④
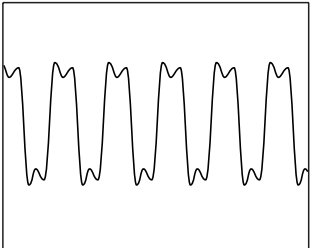
3.5 Vp-p (27 MHz)

❷ IC103 ⑧
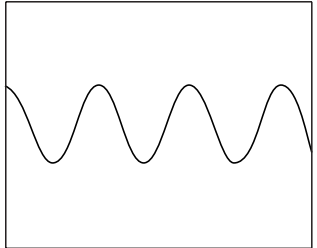
1.5 Vp-p (27 MHz)

❸ IC103 ⑨, ⑩

DVD : 3.3 Vp-p (24.57 MHz)
CD : 3.3 Vp-p (22.58 MHz)

❹ IC103 ⑬, ⑮

3.2 Vp-p (33.87 MHz)

IC102
TK11133CSCL-G

IC102
+3.3V REG

NS905V/NS915V

IC103
IC103 CY24233ZCT
PLL

NS705V/NS755V

MB-103 BOARD (5/11)

CN101 15P

IF-94 BOARD
CN403
(SEE PAGE 4-50)

15	GND
14	SC0
13	SO0
12	SI0
11	XIFCS
10	IFBSY
9	XFRRST
8	3.3V_MNT
7	+3.3V
6	GND
5	+5V
4	GND
3	+1.8V
2	M_GND
1	+11V

MB-105 BOARD (3/11)
MB-105 BOARD (9/11)
MB-105 BOARD (2/11)
MB-105 BOARD (11/11)
MB-105 BOARD (9/11)
MB-105 BOARD (3/11)
MB-105 BOARD (10/11)

MB-105 BOARD (1/11,4/11,5/11, 7/11,9/11,11/11)
MB-105 BOARD (1/11,3/11,4/11,11/11)
MB-105 BOARD (2/11,5/11,9/11)
MB-105 BOARD (4/11)
MB-105 BOARD (4/11)
MB-105 BOARD (2/11,4/11, 7/11,9/11,11/11)

4-21

4-22

CLOCK GENERATOR
MB-105 (6/11)

MB-105 (I/P CONVERTER) SCHEMATIC DIAGRAM   • See page 4-7 for printed wiring board.
– Ref. No.: MB-105 board; 2,000 series –

MB-105 BOARD (7/11)

NO MARK:PB MODE

• Waveform

❶ IC602 ⑩

1.6 Vp-p (66 MHz)

SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
PB			

MB-105 (VIDEO ENCODER, AUDIO D/A CONVERTER) SCHEMATIC DIAGRAM • **See page 4-7 for printed wiring board.**

– Ref. No.: MB-105 board; 2,000 series –

MB-105 BOARD (8/11)

NO MARK:PB MODE

SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
PB				

IC604 — VIDEO ENCODER — IC604 — ADV7300AKST

IC605 — +2.5V REG — IC605 — TK111255CSCL-G

Q601 — 2SA1162-YG-TE85L

• **Waveforms**

① IC604 ㉜ — 3.9 Vp-p (27 MHz)

② IC604 ㊷ — 850 mVp-p (H)

③ IC604 ㊸ — 950 mVp-p (H)

④ IC604 ㊹ — 1.1 Vp-p (H)

⑤ IC604 ㊲ — 650 mVp-p (H)

⑥ IC604 ㊳ — 650 mVp-p (H)

⑦ IC604 ㊴ — 950 mVp-p (H)

4-25

MB-105 (AUDIO DSP) SCHEMATIC DIAGRAM • See page 4-7 for printed wiring board.
– Ref. No.: MB-105 board; 2,000 series –

MB-105 BOARD (9/11)

NO MARK:DVD/CD PLAY
D:DVD PLAY
C:CD PLAY
P:PAL DVD PLAY
N:NTSC DVD PLAY

SIGNAL PATH
AUDIO SIGNAL
PB

IC501
AUDIO DSP
IC501
CXD1938AR

• **Waveforms**

❶ IC501 ⑥⑨, ⑭
4.1 Vp-p (3.1 MHz)

❷ IC501 ⑧, ㉞, ⑥⑦, ⑭⑧
DVD: 3.3 Vp-p (24.57 MHz)
CD: 3.3 Vp-p (22.58 MHz)

❸ IC501 ㉒
3.5 Vp-p (27 MHz)

❹ IC501 ㊷
DVD: 4.3 Vp-p (48.1 kHz)
CD : 4.3 Vp-p (44.1 kHz)

❺ IC501 ㊸
DVD: 4.4 Vp-p (3.1 MHz)
CD : 4.4 Vp-p (2.8 MHz)

AUDIO DSP
MB-105 (9/11)

4-27

4-28
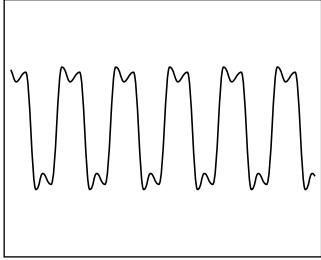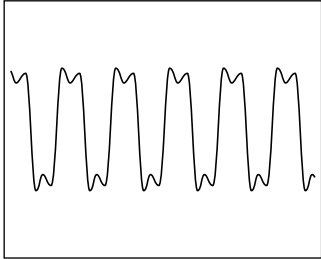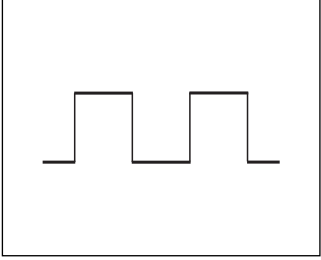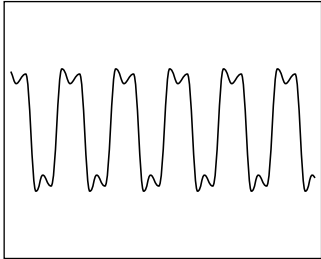
MB-105 (2ch/6ch DAC) SCHEMATIC DIAGRAM • **See page 4-7 for printed wiring board.**

– Ref. No.: MB-105 board; 2,000 series –

• **Waveforms**
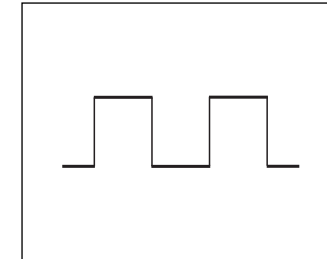
❶ IC504 ④, IC502 ⑰

DVD: 4.3 Vp-p (48.1 kHz)
CD : 4.3 Vp-p (44.1 kHz)

❷ IC504 ②, IC502 ⑨
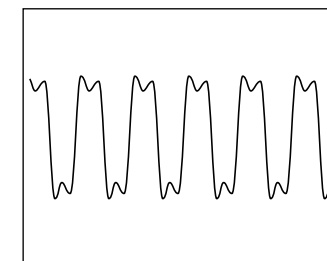
DVD: 4.4 Vp-p (3.1 MHz)
CD : 4.4 Vp-p (2.9 MHz)

❸ IC504 ①, IC502 ⑩

DVD: 3.3 Vp-p (24.57 MHz)
CD: 3.3 Vp-p (22.58 MHz)

❹ IC504 ⑨

4 Vp-p (2.84 MHz)

MB-105 BOARD (10/11)

NO MARK:DVD/CD PLAY
D:DVD PLAY
C:CD PLAY
P:PAL DVD PLAY
N:NTSC DVD PLAY

IC504
2ch DAC
CXD9674TN-E2

IC502
6ch DAC
CXD9675R-L

IC503
BUS BUFFER
TC7W32FU(TE12R)
EXCEPT
NS705V/NS905V
:AEP,UK,RUS

SIGNAL PATH
AUDIO SIGNAL
PB

2ch/6ch DAC
MB-105 (10/11)

MB-105 (SACD DECODER) SCHEMATIC DIAGRAM • **See page 4-7 for printed wiring board.**

– Ref. No.: MB-105 board; 2,000 series –

MB-105 BOARD (11/11)

NO MARK:DVD/CD PLAY
D:DVD PLAY
C:CD PLAY
*:IMPOSSIBLE TO MEASURE THE
VOLTAGE AT THE MARKED POINTS.

IC906
AMP

IC903
16M SDRAM

IC905
SACD DECODER
IC905
CXD2753R

IC901
+2.5V REG
IC901
TK11225CMCL

• Waveforms

❶ IC905 ⑪

DVD: 3.3 Vp-p (24.57 MHz)
CD: 3.3 Vp-p (22.58 MHz)

❷ IC905 ⑯

4.5 Vp-p (4.2 MHz)

❸ IC905 ⑭

4.9 Vp-p (33.78 MHz)

SIGNAL PATH

	VIDEO SIGNAL	AUDIO SIGNAL
PB	Y/CHROMA	

SACD DECODER
MB-105 (11/11)

4-31

4-32

05

LE-34 (LED) PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM
– Ref. No.: LE-34 board; 1,000 series –

: Uses unleaded solder.

There are a few cases that the part isn't mounted in this model is printed on this diagram.

LE-34 BOARD (SIDE A)

A · A

1-684-281- 11

05 | 1 | 2 | 3 | 4 | 5

LE-34 BOARD (SIDE B)

CN001 7
1

Q002
R005
R004
D004
E B
C
R007
R002 Q001 R001
D002
D001
PROGRESSIVE
MULTI CHANNEL
SUPER AUDIO CD

1-684-281- 11

05 | 5 | 4 | 3 | 2 | 1
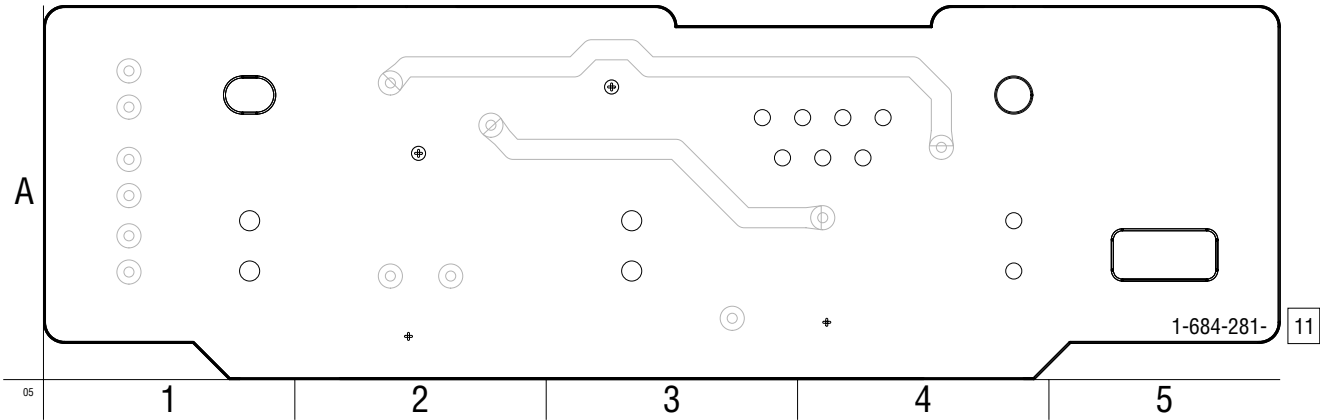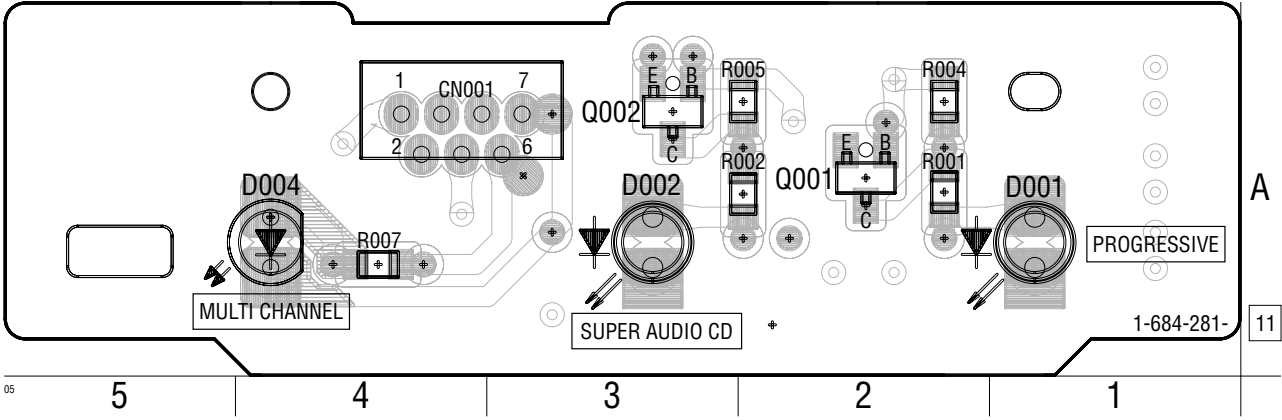
LE-34 BOARD (SIDE B)

CN001   A-4

D002   A-3
D004   A-4

LE-34 BOARD
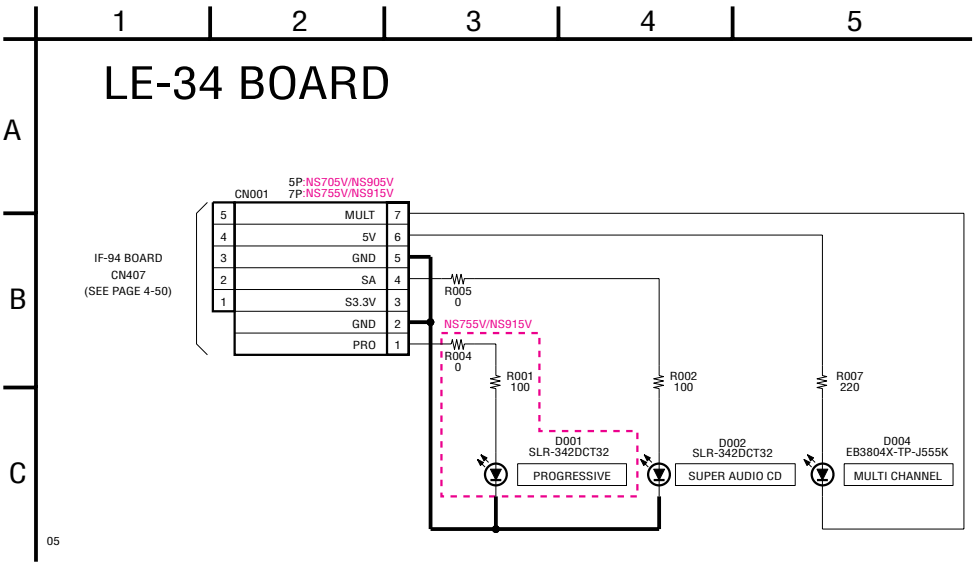
1 | 2 | 3 | 4 | 5

A

B

C

CN001
5P: NS705V/NS905V
7P: NS755V/NS915V

IF-94 BOARD
CN407
(SEE PAGE 4-50)

5 | MULT | 7
4 | 5V | 6
3 | GND | 5
2 | SA | 4
1 | S3.3V | 3
| GND | 2
| PRO | 1

R005
0

NS755V/NS915V
R004
0

R001
100

R002
100

R007
220

D001
SLR-342DCT32
PROGRESSIVE

D002
SLR-342DCT32
SUPER AUDIO CD

D004
EB3804X-TP-J555K
MULTI CHANNEL

05

Power Block
(ETXNY393N2F (NS705V/NS905V/NS915V: HK, SP, MY, TH, PH, IA, VTM, KR))
(HS12S1U (NS755V/NS915V: TW))
(HS12S1F (NS915V: LA))
(SWITCHING REGULATOR)

ER-19
(NS705V/NS905V: AEP, UK, RUS)
(EURO AV)

AV-64
(AUDIO/VIDEO OUT)

LE-34
(LED)

MS-81
(LOADING)

MB-105
(SIGNAL PROCESS, SERVO)

IF-94
(INTERFACE CONTROL)

LED
LE-34

DVP-NS705V/NS755V/NS905V/NS915V

AV-64 (AUDIO/VIDEO OUT) PRINTED WIRING BOARD

⊯ : Uses unleaded solder.

– Ref. No.: AV-64 board; 1,000 series –

There are a few cases that the part isn't mounted in this model is printed on this diagram.

AV-64 BOARD (SIDE A)

Power Block
(ETXNY393N2F (NS705V/NS905V/NS915V: HK, SP, MY, TH, PH, IA, VTM, KR))
(HS12S1U (NS755V/NS915V: TW))
(HS12S1F (NS915V: LA))
(SWITCHING REGULATOR)

ER-19
(NS705V/NS905V: AEP, UK, RUS)
(EURO AV)

AV-64
(AUDIO/VIDEO OUT)

LE-34
(LED)

MS-81
(LOADING)

IF-94
(INTERFACE CONTROL)

MB-105
(SIGNAL PROCESS, SERVO)

AV-64 BOARD (SIDE A)

IC	
IC103	H-17
IC201	E-23
IC202	D-21
IC203	D-19
IC302	I-21
IC303	D-17
Q201	H-20
Q202	F-19
Q203	F-20

AV-64 BOARD (SIDE B)

DIGITAL OUT
COAXIAL   OPTICAL

5.1CH OUTPUT
FRONT   REAR
L
R
CENTER
WOOFER

AEP, UK, RUS
R   AUDIO   L   VIDEO   S VIDEO OUT

EXCEPT AEP, UK, RUS
LINE OUT
R   AUDIO 1   L   VIDEO 1
R   AUDIO 2   L   VIDEO 2
S VIDEO OUT
1
2

COMPONENT VIDEO OUT
Y   PB   PR

PROGRESSIVE ← INTERLACE → SELECTABLE

1-684-278-

AV-64 BOARD (SIDE B)

CN302	D-2	Q206	B-18
		Q207	B-19
D101	B-14	Q208	B-21
D102	B-13	Q209	B-22
D106	B-13	Q301	C-24
D107	B-12	Q302	B-14
D108	C-3	Q303	B-15
D109	G-16	Q304	B-15
D301	C-8	Q305	B-17
D303	D-15	Q306	B-17
		Q307	C-14
IC102	C-3	Q308	C-14
IC301	A-23	Q309	C-15
		Q310	B-7
Q204	B-20	Q311	B-8
Q205	B-21	Q312	C-6

AUDIO/VIDEO OUT
AV-64

AV-64 (VIDEO BUFFER) SCHEMATIC DIAGRAM • See page 4-35 for printed wiring board.
– Ref. No.: AV-64 board; 1,000 series –

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

AV-64 BOARD (1/3)

NO MARK:PB MODE

SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
PB	⇒	⇒⇒	⇒⇒⇒	⇒

*IC103
LA73051-TLM:NS705V/NS905V:AEP,UK,RUS(24PIN)
LA73053-TLM-E:NS755V/NS905V:EA,ME,AUS,NZ/NS915V(36PIN)

IC103
VIDEO BUFFER

IC102
NJM79M05DL1A(TE2)
-5V REG

AV-64 BOARD (2/3)

COMPONENT VIDEO OUT

S VIDEO OUT

EXCEPT NS705V/NS905V:AEP,UK,RUS

NS705V/NS905V:AEP,UK,RUS

NS755V/NS915V

SELECTABLE
INTERLACE   SCAN SELECT
PROGRESSIVE

• Waveforms

❶ IC103 ㉑ : AEP, UK, RUS
IC103 ㉝ : EXCEPT AEP, UK, RUS
2.4 Vp-p (H)

❷ IC103 ⑲ : AEP, UK, RUS
IC103 ㉛ : EXCEPT AEP, UK, RUS
1.8 Vp-p (H)

❸ IC103 ⑰ : AEP, UK, RUS
IC103 ㉙ : EXCEPT AEP, UK, RUS
2.0 Vp-p (H)

❹ IC103 ㉔ : EXCEPT AEP, UK, RUS
2.0 Vp-p (H)

❺ IC103 ㉒ : EXCEPT AEP, UK, RUS
1.3 Vp-p (H)

❻ IC103 ⑳ : EXCEPT AEP, UK, RUS
1.3 Vp-p (H)

VIDEO BUFFER
AV-64 (1/3)

AV-64 (AUDIO AMP) SCHEMATIC DIAGRAM • **See page 4-35 for printed wiring board.**

– Ref. No.: AV-64 board; 1,000 series –

AV-64 BOARD (2/3)

NO MARK:PB MODE

	SIGNAL PATH			
	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
PB	⇒	⇒	⇒⇒	⇒

IC303 — AUDIO AMP
BA4558F-E2 NS705V/NS755V
BA15532F-E2 NS905V/NS915V

IC302 — +5V REG
NJM78M05DL1A-TE1

IC301 — OPTICAL DIGITAL OUTPUT
GP1FA551TZ

AUDIO AMP
AV-64 (2/3)

AV-64 (5.1CH AUDIO AMP) SCHEMATIC DIAGRAM • See page 4-35 for printed wiring board.
– Ref. No.: AV-64 board; 1,000 series –

AV-64 BOARD (3/3)

NO MARK:DVD/CD PLAY
D:DVD PLAY
C:CD PLAY

IC201 — 5.1CH FRONT AUDIO AMP
*IC201 BA4558F-E2:NS705V/NS755V
BA15532F-E2:NS905V/NS915V

IC202 — 5.1CH REAR AUDIO AMP
*IC202 BA4558F-E2:NS705V/NS755V
BA15532F-E2:NS905V/NS915V

IC203 — 5.1CH WOOFER AUDIO AMP
*IC203 BA4558F-E2:NS705V/NS755V
BA15532F-E2:NS905V/NS915V

CN201 17P
MB-105 BOARD (10/11)
CN501
(SEE PAGE 4-30)

Pin	Signal
17	C-
16	C+
15	SW+
14	SW-
13	SL-
12	SL+
11	SR+
10	SR-
9	GND
8	FL-
7	FL+
6	GND
5	FR+
4	FR-
3	GND
2	SPDIF
1	MA_6CH_MUTE

Q208 TRANSISTOR2SD1938 (F)-ST(TX).SO
Q208,209 MUTE
Q209 TRANSISTOR2SD1938 (F)-ST(TX).SO
Q204 TRANSISTOR2SD1938 (F)-ST(TX).SO
Q204,205 MUTE
Q205 TRANSISTOR2SD1938 (F)-ST(TX).SO
Q206 TRANSISTOR2SD1938 (F)-ST(TX).SO
Q206,207 MUTE
Q207 TRANSISTOR2SD1938(F)-ST(TX).SO
Q203 2SB709A-QRS-TX
Q201-203 MUTE DRIVE
Q202 DTC124TKA-T146
Q201 UN2213-TX

J201 6P
1L 2
1GND 3
1R 1
2L 5
2GND 6
2R 4
A1 8
B 9
A2 7

5.1CH OUTPUT
FRONT R / FRONT L
REAR R / REAR L
WOOFER / CENTER

SIGNAL PATH
AUDIO SIGNAL
PB

OPAMP-9V
OPAMP+9V
L_MUTE
R_MUTE
B-
B+
P_GND
SPDIF
SPDIF_GND
MUTE_V
A_MUTE

AV-64 BOARD (2/3)

IF-94 (INTERFACE CONTROL) PRINTED WIRING BOARD
– Ref. No.: IF-94 board; 1,000 series –

🔲 : Uses unleaded solder.

There are a few cases that the part isn't mounted in this model is printed on this diagram.

IF-94 BOARD (SIDE A)

IF-94 BOARD (SIDE A)

IC403   H-11

Power Block
(ETXNY393N2F (NS705V/NS905V/NS915V: HK, SP, MY, TH, PH, IA, VTM, KR))
(HS12S1U (NS755V/NS915V: TW))
(HS12S1F (NS915V: LA))
(SWITCHING REGULATOR)

ER-19
(NS705V/NS905V: AEP, UK, RUS)
(EURO AV)

AV-64
(AUDIO/VIDEO OUT)

LE-34
(LED)

MS-81
(LOADING)

MB-105
(SIGNAL PROCESS, SERVO)

IF-94
(INTERFACE CONTROL)

INTERFACE CONTROL
IF-94

IF-94 BOARD (SIDE B)

CN403	I-20
CN405	I-22
CN406	H-23
CN407	H-I
D401	E-10
D402	E-10
D403	I-5
D404	I-5
D405	I-5
D406	I-5
D412	I-5
IC404	G-10
IC405	F-9
IC406	K-4
Q401	H-3
Q402	I-3
Q404	E-3
Q405	D-3

IF-94 BOARD (SIDE B)

INTERFACE CONTROL
IF-94

4-47

4-48

IF-94 (IF CON) SCHEMATIC DIAGRAM
– Ref. No.: IF-94 board; 1,000 series –

IF-94 BOARD
NO MARK:DVD/CD PLAY
*:IMPOSSIBLE TO MEASURE THE
VOLTAGE AT THE MARKED POINTS.

IC403
+1.8V REG
IC403
LMS817ADTX-1.8/NOPB

IC404
IF CON
IC404
86CK74AFG-3V35/M

IC405
RESET
IC405
S-80830ANBP-EDT-T2

IC406
REMOTE
COMMANDER
RECEIVER
IC406
GP1UD28SYK

ND401   FLUORESCENT INDICATOR TUBE
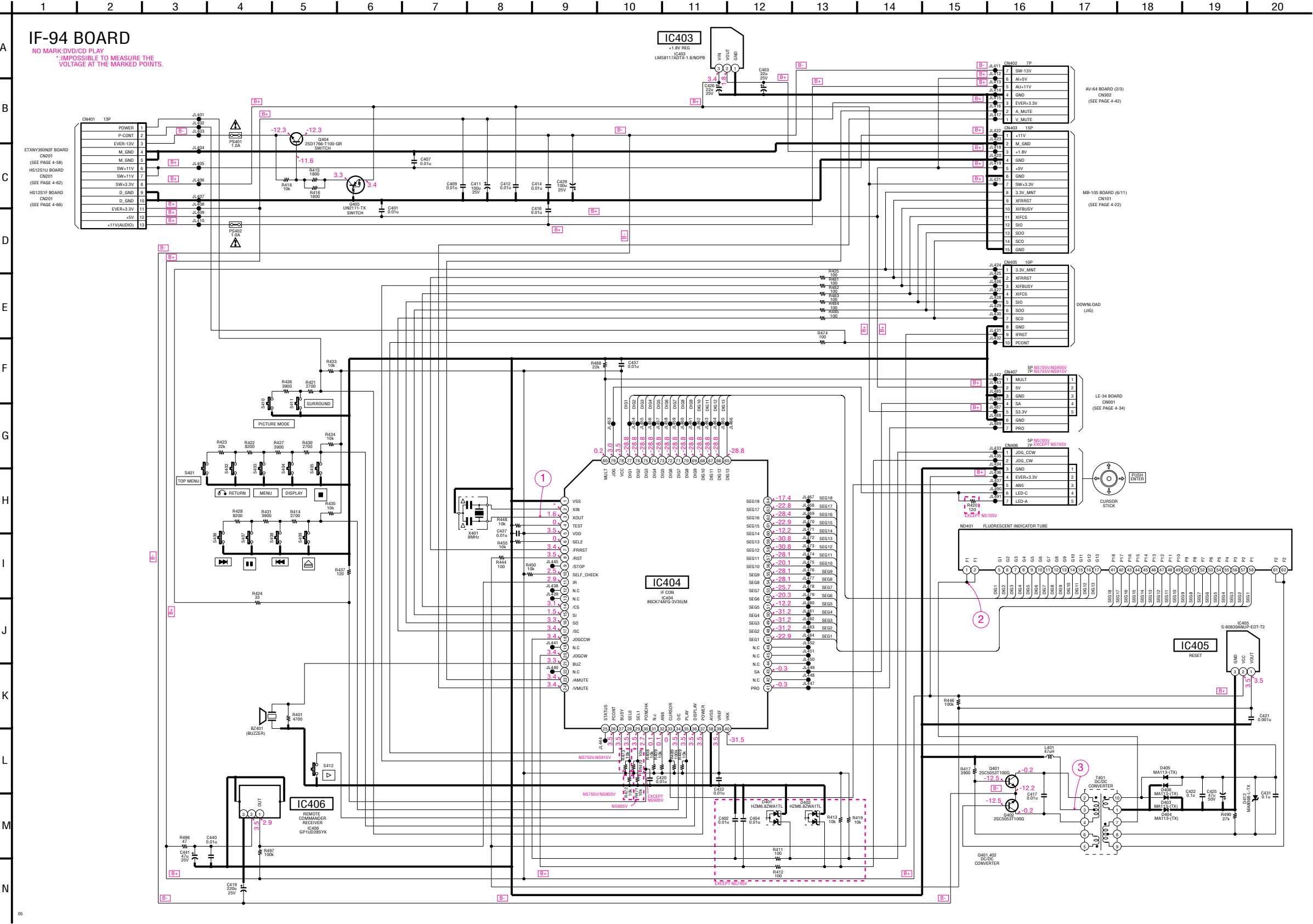
• Waveforms

❶ IC404 ③
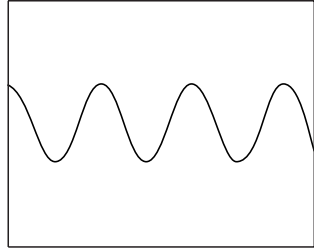
3.4 Vp-p (8 MHz)

❷ ND401 ①, ②
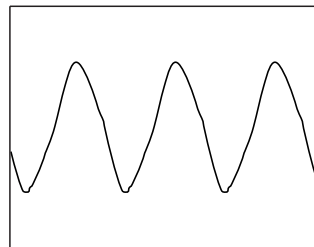
8 Vp-p (200 kHz)

❸ T401 ③
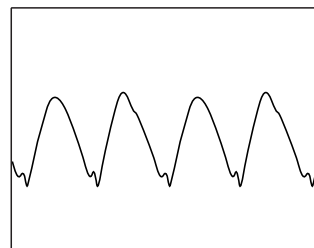
20 Vp-p (409 kHz)

The components identified by mark ⚠ or dotted
line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont
critiques pour la sécurité.   Ne les remplacer que
par une pièce portant le numéro spécifié.

IF CON
IF-94

DVP-NS705V/NS755V/NS905V/NS915V

ER-19 (EURO AV) PRINTED WIRING BOARD
– Ref. No.: ER-19 board; 1,000 series –

– NS705V/NS905V: AEP, UK, RUS –

🜋 : Uses unleaded solder.

There are a few cases that the part isn't mounted in this model is printed on this diagram.

ER-19 BOARD (SIDE A)

ER-19 BOARD (SIDE A)

CN901	D-10
D906	C-7
Q911	C-10

1-684-280-

ER-19 BOARD (SIDE B)

LINE 1 (RGB) - TV

LINE 2

ER-19 BOARD (SIDE B)

D901	D-4
D902	C-5
D903	C-4
D904	C-10
D905	C-12
D907	C-6
D917	B-12
D918	B-10
D919	B-10
D920	B-9
D922	B-9
D924	B-8
D926	B-4
D927	B-3
D929	B-11
D930	B-10
Q901	E-4
Q902	D-4
Q903	D-4
Q906	E-3
Q907	D-3
Q908	E-3
Q909	E-5
Q910	D-5
Q912	C-5
Q913	C-4
Q914	C-10
Q915	C-12

1-684-280-

Power Block
(ETXNY393N2F (NS705V/NS905V/NS915V: HK, SP, MY, TH, PH, IA, VTM, KR))
(HS12S1U (NS755V/NS915V: TW))
(HS12S1F (NS915V: LA))
(SWITCHING REGULATOR)

ER-19
(NS705V/NS905V: AEP, UK, RUS)
(EURO AV)

AV-64
(AUDIO/VIDEO OUT)

LE-34
(LED)

MS-81
(LOADING)

IF-94
(INTERFACE CONTROL)

MB-105
(SIGNAL PROCESS, SERVO)

EURO AV
ER-19

4-51

4-52

ER-19 (EAURO AV) SCHEMATIC DIAGRAM

– Ref. No.: EAURO AV board; 4,000 series –

– NS705V/NS905V: AEP, UK, RUS –

ER-19 BOARD

NO MARK:PB MODE

IC901
VIDEO BUFFER
IC901 LA73052-TLM

CN901 21P

MB-105 BOARD (8/11)
CN601
(SEE PAGE 4-26)

V	1
-5V	2
C	3
GND	4
Y	5
GND	6
Y/G	7
GND	8
Cb/R	9
GND	10
Cr/B	11
VMUTE	12
WIDE	13
+5V	14
DISCEXT	15
+11V	16
ERAUDIOR	17
GND(AU)	18
EUROVY	19
ERAUDIOL	20
RGBSEL	21

CNJ902 21P

21	GND(E)
20	V_IN
19	V/Y_OUT
18	GND(E)
17	GND(E)
16	BLANKING_OUT
15	R_IN
14	R/C_OUT
13	GND(E)
12	N.C.
11	G_OUT
10	AVLINK0
9	GND(E)
8	FUNCTION_SW_OUT
7	B_OUT
6	A(L)IN
5	GND(E)
4	A(L)OUT
3	A(R)IN
2	GND(A)
1	A(R)OUT

LINE 1 (RGB)-TV

CNJ901

21	GND(E)
20	V_IN
19	V_OUT
18	GND(E)
17	GND(E)
16	BLANKING_IN
15	R_IN
14	GND(E)
13	GND(E)
12	N.C.
11	G_IN
10	AVLINKI
9	GND(E)
8	FUNCTION_SW_IN
7	B_IN
6	A(L)IN
5	GND(E)
4	A(L)OUT
3	A(R)IN
2	GND(A)
1	A(R)OUT

LINE 2

Q901-904
I SIG GEN

Q906-908
AV CONT GEN

Q909,910
RELAY DRIVE CONT

SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
PB				

• Waveforms

❶ IC901 ㉞ (LINE : RGB mode)

❶ IC901 ㉞ (LINE : S VIDEO mode)

❷ IC901 ㉙ (LINE : RGB mode)

❸ IC901 ㉗ (LINE : RGB mode)

❹ IC901 ㉕

❹ IC901 ㉕ (LINE : S VIDEO mode)

1.4 Vp-p (H)   1.7 Vp-p (H)   1.4 Vp-p (H)   1.4 Vp-p (H)   2.4 Vp-p (H)   2.0 Vp-p (H)

EURO AV
ER-19

DVP-NS705V/NS755V/NS905V/NS915V

ETXNY393N2F (SWITCHING REGULATOR) PRINTED WIRING BOARD
– Ref. No.: ETXNY393N2F board; 5,000 series –

– NS705V/NS905V/NS915V: HK, SP, MY, TH, PH, IA, VTM, KR –

🔲 : Uses unleaded solder.

ETXNY393N2F BOARD

1-468-651-

|11|

Power Block
(ETXNY393N2F (NS705V/NS905V/NS915V: HK, SP, MY, TH, PH, IA, VTM, KR))
(HS12S1U (NS755V/NS915V: TW))
(HS12S1F (NS915V: LA))
(SWITCHING REGULATOR)

ER-19
(NS705V/NS905V: AEP, UK, RUS)
(EURO AV)

AV-64
(AUDIO/VIDEO OUT)

LE-34
(LED)

MS-81
(LOADING)

IF-94
(INTERFACE CONTROL)

MB-105
(SIGNAL PROCESS, SERVO)

ETXNY393N2F BOARD

CN101	A-1
CN201	B-4
D102	A-3
D103	B-3
D104	B-2
D105	B-2
D106	B-2
D107	B-2
D201	A-4
D202	A-4
D203	A-4
D205	B-5
D301	A-4
IC101	A-2
IC201	B-5
IC202	A-5
Q202	B-6
Q203	B-6
Q204	B-4
Q205	B-5
Q301	B-5

SWITCHING REGULATOR
ETXNY393N2F

ETXNY393N2F (SWITCHING REGULATOR) SCHEMATIC DIAGRAM

– Ref. No.: ETXNY393N2F board; 5,000 series –

– NS705V/NS905V/NS915V: HK, SP, MY, TH, PH, IA, VTM, KR –

ETXNY393N2F BOARD

AC220-240V

IF-94 BOARD
CN401
(SEE PAGE 4-49)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SWITCHING REGULATOR
ETXNY393N2F

HS12S1U (SWITCHING REGULATOR) PRINTED WIRING BOARD

– Ref. No.: HS12S1U board; 5,000 series –

There are a few cases that the part isn't mounted in this model is printed on this diagram.

– NS755V/NS915V: TW –

⊔F : Uses unleaded solder.

HS12S1U BOARD

POWER

SECONDARY / PRIMARY

1-468-650- [11]

1	2	3	4	5

HS12S1U BOARD

CN101	A-1
CN201	B-4
D101	B-2
D103	A-2
D110	A-3
D211	A-4
D212	A-4
D213	A-4
D221	A-3
D311	A-4
D312	A-4
D313	B-5
D511	B-4
D611	A-4
D612	A-4
D621	A-5
D622	A-5
IC101	A-3
IC301	A-3
IC411	B-5
IC611	A-5
Q211	B-5
Q311	B-4
Q611	A-5
Q621	A-5
Q712	B-5

Power Block
(ETXNY393N2F (NS705V/NS905V/NS915V: HK, SP, MY, TH, PH, IA, VTM, KR))
(HS12S1U (NS755V/NS915V: TW))
(HS12S1F (NS915V: LA))
(SWITCHING REGULATOR)

ER-19
(NS705V/NS905V: AEP, UK, RUS)
(EURO AV)

AV-64
(AUDIO/VIDEO OUT)

LE-34
(LED)

MS-81
(LOADING)

MB-105
(SIGNAL PROCESS, SERVO)

IF-94
(INTERFACE CONTROL)
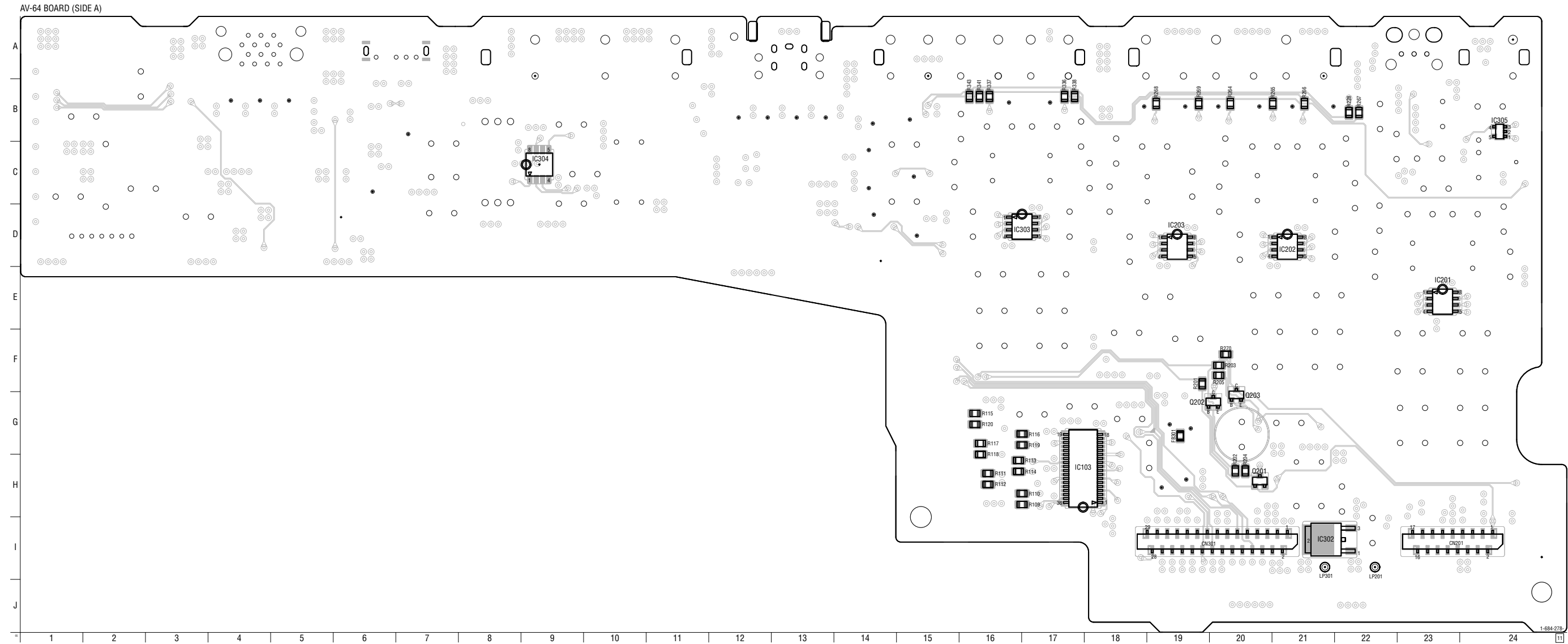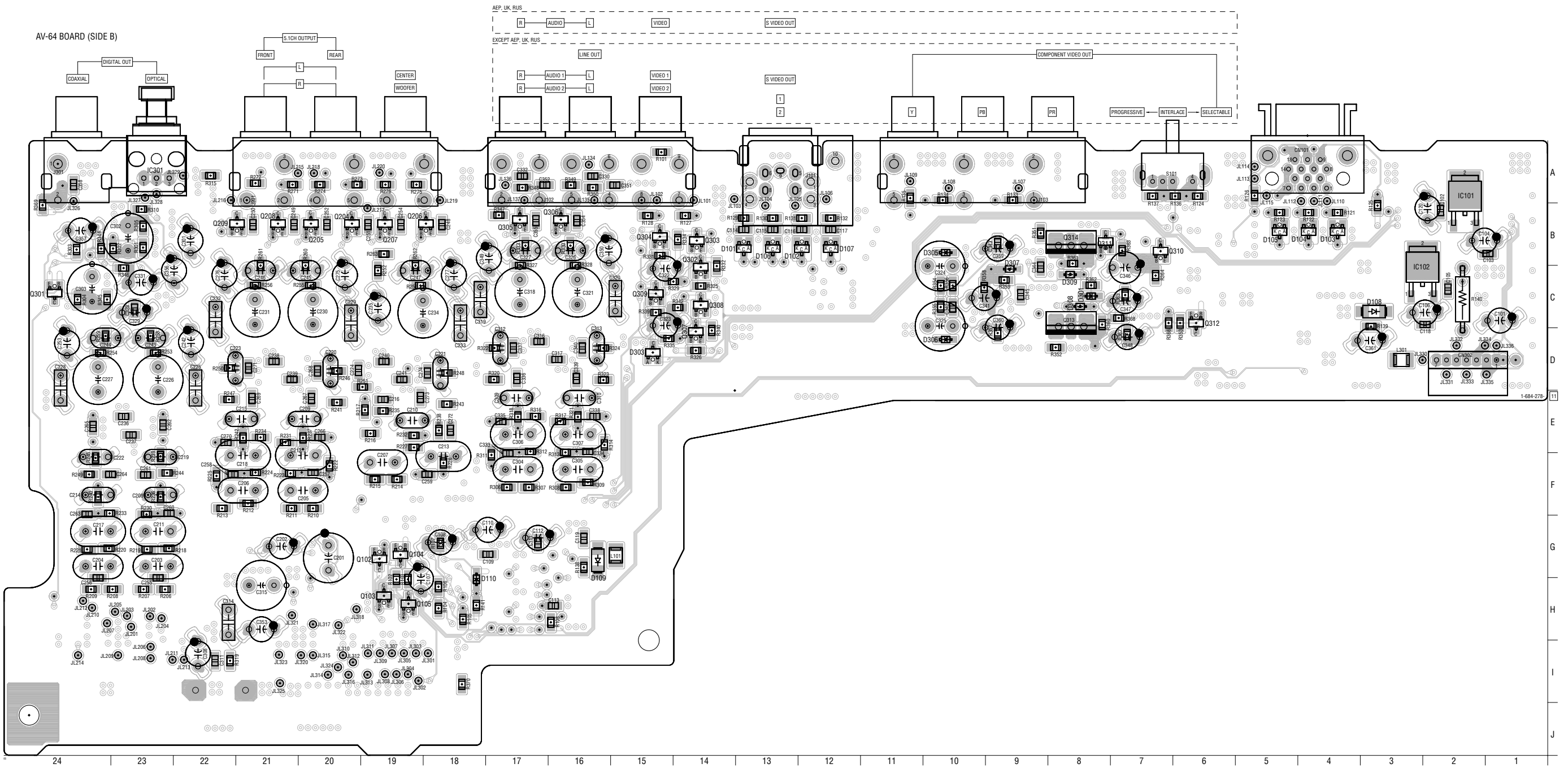
SWITCHING REGULATOR
HS12S1U
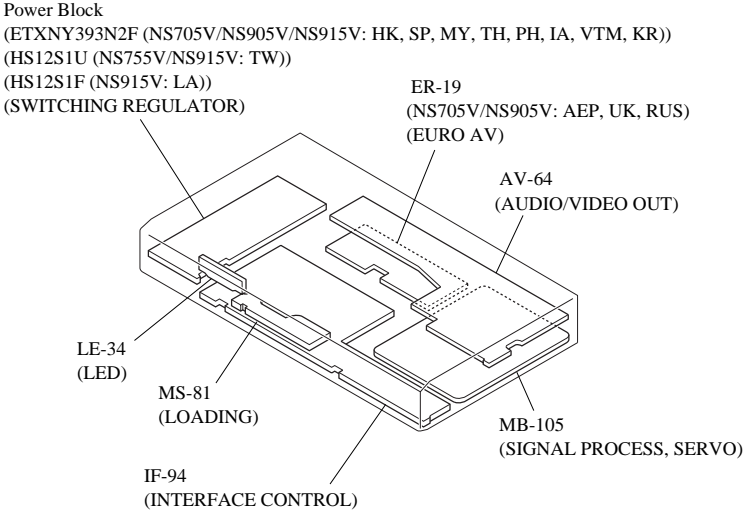
HS12S1U (SWITCHING REGULATOR) SCHEMATIC DIAGRAM • See page 4-37 for printed wiring board.
– Ref. No.: HS12S1U board; 5,000 series –

– NS755V/NS915V: TW –

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
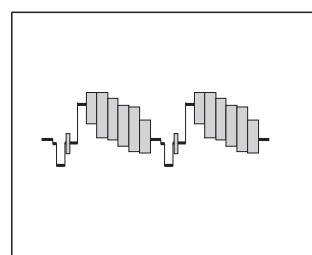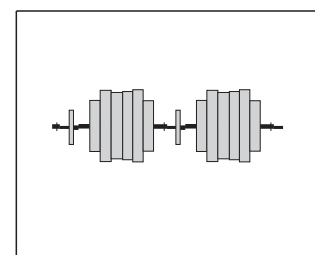
HS12S1U BOARD
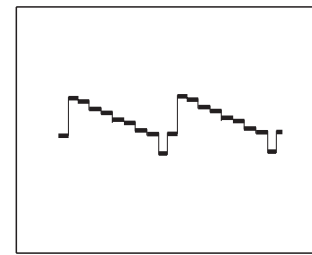
NO MARK: E-E MODE

1	2	3	4	5	6	7	8

T101

Q211 2SJ525 B+ SWITCH

L211 10uH

B+

D211 S3L20U

C211 150uF 35V

C213 47uF 35V

R212 47k

D313 1SS270A

R211 1.5k

D213 D1NS4/6

D221 D1NL20U

B+

L221 100uH

R613 220 1/2W

R213 680

SW201

CN201 13P

1	POWER
2	P-CONT
3	EVER–13V
4	MGND
5	MGND
6	SW+11V
7	SW+11V
8	SW+3.3V
9	D_GND
10	D_GND
11	EVER+3.3V
12	SW+5V
13	+11V (AUDIO)

IF-94 BOARD CN401 (SEE PAGE 4-49)

C110 120uF 200V

IC101 SWITCH

IC101 MIP2E4DMY 303.5

C151 150pF 2kV

L110 45

R110 10

D312 D1N60

C221 100uF 35V

C223 47uF 35V

R313 270

D311 D1NS4

L311 39uH

P311 1A/125V

Q311 2SD1768S B+ SWITCH

IC611 SHUNT REG

IC611 PQ12RF11

R311 1k

C314 22uF 50V

D110 D1NL20U

R113 100

C112 47uF 35V

D103 MTZJ7.5

C111 10uF 50V

D612 D1N60

D611 D2S4M

IC411 SHUNT REG

IC411 XC6201P352TH

Q611 2SC2655 B+ SWITCH

R621 680

C117 1uF 50V

C611 330uF 35V

C313 47uF 35V

C311 150uF 35V

C613 47uF 35V

R631 2.2k

C614 47uF 35V

R711 1.8k

C413 47uF 35V

Q621 DTC143ESA LED DRIVE

R622 120

R622 (SHORT)

Q712 DTC143ESA POWER CONTROL

C711 47uF 35V

D621 SLR-343VC

D622 SLR-343MC

R633 1.2k

D621,622 (ON/STANDBY)

C511 100uF 35V

C513 47uF 35V

D212 RD33F

CN101 2P

F101 2A 125V

L101 18mH

L102 18mH

D511 D2L20U

P511 1.5A/125V

L511 10uH

AC IN

C101 0.1uF 250V

D101 S1WBA60

PC101 TLP421F

R301 68

R304 1.2k

C103 100pF 250V

C104 100pF 250V

R303 2.2k

R305 390

FG101

C107 1000pF 250V

IC301 SHUNT REG

C301 1uF 50V

C302 10uF 50V

IC301 AN1431T

R306 1.5k

FG201

SWITCHING REGULATOR
HS12S1U

05

HS12S1F (SWITCHING REGULATOR) PRINTED WIRING BOARD
– Ref. No.: HS12S1F board; 5,000 series –

There are a few cases that the part isn't mounted in this model is printed on this diagram.

– NS915V: LA –

[LF] : Uses unleaded solder.

HS12S1F BOARD

1-468-652- [11]

1	2	3	4	5

HS12S1F BOARD

CN101	A-1
CN201	B-4
D101	B-2
D103	A-2
D110	A-3
D211	A-4
D212	A-4
D213	A-4
D221	A-3
D311	A-4
D312	A-4
D313	B-5
D511	B-4
D611	A-4
D612	A-4
D621	A-5
D622	A-5
IC101	A-3
IC301	A-3
IC411	B-5
IC611	A-5
Q211	B-5
Q311	B-4
Q611	A-5
Q621	A-5
Q712	B-5

Power Block
(ETXNY393N2F (NS705V/NS905V/NS915V: HK, SP, MY, TH, PH, IA, VTM, KR))
(HS12S1U (NS755V/NS915V: TW))
(HS12S1F (NS915V: LA))
(SWITCHING REGULATOR)

ER-19
(NS705V/NS905V: AEP, UK, RUS)
(EURO AV)

AV-64
(AUDIO/VIDEO OUT)

LE-34
(LED)

MS-81
(LOADING)

MB-105
(SIGNAL PROCESS, SERVO)

IF-94
(INTERFACE CONTROL)

SWITCHING REGULATOR
HS12S1F

HS12S1F (SWITCHING REGULATOR) SCHEMATIC DIAGRAM • See page 4-37 for printed wiring board.
– Ref. No.: HS12S1F board; 5,000 series –

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

– NS915V: LA –

HS12S1F BOARD

NO MARK: E-E MODE

SWITCHING REGULATOR
HS12S1F

SECTION 5
IC PIN FUNCTION DESCRIPTION

5-1. SYSTEM CONTROL PIN FUNCTION (MB-105 BOARD IC104)

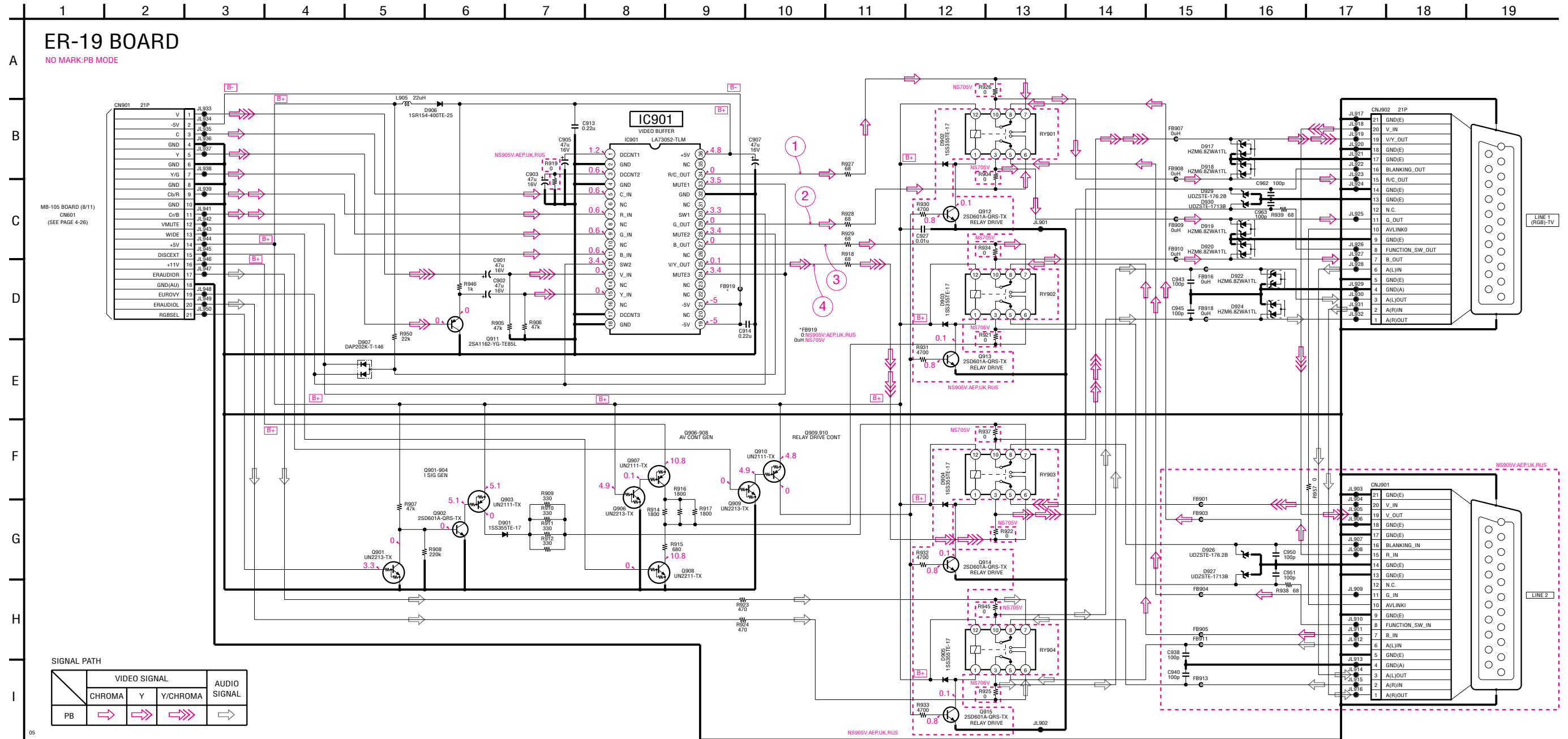| Pin No.	Pin name	I/O	Function
1-5	HA17-HA21	O	Address bus A17-A21
6	HA22	-	Not used
7	WP	O	I2C EEPROM write protect output
8	XSACS	O	SACD DEC Chip select signal output
9	AVCC	-	Power supply (+3.3 V)
10	AVRH	-	Reference power supply (+3.3 V)
11	AVSS	-	Ground
12	AN0	I	Set of mode 0
13	AN1	I	Set of mode 1
14	AN2	I	Set of mode 2
15	AN3	I	Set of mode 3
16	INT0	I	AV DEC Interrupt input
17	INT1	I	ARP Interrupt input
18	INT2	I	SDSP Interrupt input
19	INT3	-	Not used
20	INT4	I	IF CON Interrupt input
21	INT5	I	ADSP Interrupt input
22	INT6	I	ADSP Interrupt input
23	INT7	I	SACD DEC Interrupt input
24	VCC	-	Power supply (+3.3 V)
25	SI0	I	Serial bus 0 (data input)
26	SO0	O	Serial bus 0 (data output)
27	SC0	O	Serial bus 0 (clock output)
28	SI1	I	Serial bus 1 (data input)
29	SO1	O	Serial bus 1 (data output)
30	SC1	O	Serial bus 1 (clock output)
31	SI2	I	Serial bus 2 (data input)
32	SO2	O	Serial bus 2 (data output)
33	DVD/SACD	O	DVD/SACD Select signal output
34	VSS	-	Ground
35	XRST	O	System reset signal output
36	WIDE	O	WIDE Select signal output
37	RGBSEL	O	VIDEO Select signal output
38	SDA	I/O	I2C data input/output
39	SCL	O	I2C clock output
40	XSARST	O	SACD DEC Reset signal output
41	EUROV/Y	O	VIDEO Select signal output
42	EXT/DSEL	O	Line input/output select signal output
43	MD0	I	Input of mode select 0 (fixed at "H")
44	MD1	I	Input of mode select 1 (fixed at "L")
45	MD2	I	Input of mode select 2 (fixed at "L")
46	DREQ0	I	AV DEC DMA –REQ0 input
47	DACK0	O	AV DEC DMA –ACK0 output
48	XDRVMUTE	O	Drive mute signal output
49	DREQ1	I	AV DEC DMA –REQ1 input
50	DACK1	O	AV DEC DMA –ACK1 output
51	XIFCS	O	IF CON Chip select signal output
52	VSS	-	Ground
53	X1	O	Clock output (16.5 MHz)
54	X2	I	Clock input (16.5 MHz)
55	VCC	-	Power supply (+3.3 V)
56	CKSW1	I	Chuck Sensor input
57	OCSW1	I	Tray Sensor input
58	CS0X	O	External ROM chip select signal output
59	CS1X	O	Extranal RAM chip select signal output
60	CS2X	O	AV DEC Chip select signal output
61	CS3X	O	AV DEC Chip select signal output
62	CS4X	O	ARP Chip select signal output
63	CS5X	O	SDSP Chip select signal output
64	VCCI	-	Power supply (+1.8 V)
65	CS6X	-	Not used
66	CS7X	-	Not used
67	XWAIT	I	Wait signal input
68	BGRNTX	I	Test terminal (fixed at "H")
69	BRQ	I	Test terminal (fixed at "L")
70	XRD	O	Read enable signal output
71	XWRH	O	High byte write enable signal output
72	XWRL	O	Lower byte write enable signal output

Pin No.	Pin name	I/O	Function
73	NMIX	I	Not used (fixed at "H")
74	VCCI	-	Power supply (+1.8 V)
75	VSS	-	Ground
76	XFRRST	I	IF CON Reset signal input
77	CPUCK	O	CPU clock signal output
78	SMUTE	O	SACD mute signal output
79	XDACS	O	DAC (2ch, 6ch) chip select signal output
80	X38CS	O	ADSP chip select signal ouptut
81	48/44.1K	O	PLL FS control signal output
82	XLDON	O	Laser diode mute signal output
83	MA_MUTE	O	Audio mute signal output
84	SRAMWE	O	External RAM write enable signal output
85-92	HD0-HD7	I/O	Data bus D0-D7 (16 bit only)
93-100	HD8-HD15	I/O	Data bus D8-D15 (16 bit) , D0-D7 (8 bit)
101	VSS	-	Ground
102-109	HA0-HA7	O	Address bus A00-A07
110	VCC	-	Power supply (+3.3 V)
111-118	HA8-HA15	O	Address bus A08-A15
119	VSS	-	Ground
120	HA16	O	Address bus A16

SECTION 6
TEST MODE

6-1. GENERAL DESCRIPTION

The Test Mode allows you to make diagnosis and adjustment easily using the remote commander and monitor TV. The instructions, diagnostic results, etc. are given on the on-screen display (OSD).

6-2. STARTING TEST MODE

Press the TOP MENU , CLEAR , POWER keys on the remote commander in this order with the power of main unit in OFF status, and the Test Mode starts, then "DIAG START" will be displayed on the fluorescent display tube and the menu shown below will be displayed on the TV screen. At the bottom of menu screen, the model name and revision number are displayed. Last Off at the lower right of screen indicates the information code concerning the last power off.

To execute each function, select the desired menu and press its number on the remote commander.

To exit from the Test Mode, press the I/⏻ key.

```
         Test Mode Menu

0. Syscon Diagnosis
1. Drive Auto Adjustment
2. Drive Manual Operation
3. Mecha Aging
4. Emargency Hisory
5. Version Information
6. Video Level Adjustment
                    Exit: Power Key
_

Model:DPX-16xxxx
Revision:x.xxx       Last Off: xx
```

Power Off Information Code List

00 : Primary Power Off
01 : Power Off Request from SYSTEM CONTROL
02 : Power Off by Emergency Power Off Command from SYSTEM CONTROL
    (if information is sent from SYSTEM CONTROL)
03 : IF CON Judged that SYSTEM CONTROL is Faulty
04 : Power Off from Diagnosis Mode of IF CON
05 : Forced Power Off by the User
06 : Power Off by Power Supply Voltage Monitor

6-3. SYSCON DIAGNOSIS

The same contents as board detail check by serial interface can be checked from the remote commander.

On the Test Mode Menu screen, press 0 key on the remote commander, and the following check menu will be displayed.

```
    ### Syscon Diagnosis ###
          Check Menu
0. Quit
1. All
2. Version
3. Peripheral
4. Servo
5. Supply
6. AV Decoder
7. Video
8. Audio
_
```

0. Quit

Quit the Syscon Diagnosis and return to the Test Mode Menu.

1. All

All items continuous check

This menu checks all diagnostic items continuously. Normally, all items are checked successively one after another automatically unless an error is found, but at a certain item that requires judgment through a visual check to the result, the following screen is displayed for the key entry.

```
    ### Syscon Diagnosis ###

        Diag All Check
        No. 2 Version

 2-3. ROM Check Sum
Check Sum = xxxx


Press NEXT Key to Continue
Press PREV Key to Repeat
_
```

For the ROM Check, the check sum calculated by the Syscon is output, and therefore you must compare it with the specified value for confirmation.

Following the message, press ▶▶| key to go to the next item, or |◀◀ key to repeat the same check again. To quit the diagnosis and return to the Check Menu screen, press ■ or ENTER key. If an error occurred, the diagnosis is suspended and the error code is displayed as shown below.

```
    ### Syscon Diagnosis ###



 3-3. EEPROM Check
Error 03: EEPROM Write/Reed N
Address    : 00000001
Write Data : 2492
Read Data : 2490
Press NEXT Key to Continue
Press PREV Key to Repeat
_
```

Press ■ key to quit the diagnosis, or |◀◀ key to repeat the same item where an error occurred, or ▶▶| key to continue the check from the item next to faulty item.

Submenu

Selecting 2 and subsequent items calls the submenu screen of each item.

Indication of "–" in the submenu means the check is not supported with the model.

For example, if "5. Supply" is selected, the following submenu will be displayed.

```
    ### Syscon Diagnosis ###
          Check Menu
            No. 5 Supply
  0. Quit
  1. All
  2. ARP Register Check
  3. ARP to RAM Data Bus
  4. ARP to RAM Address Bus
  5. ARP RAM Check

  _
```

0. Quit
Quit the submenu and return to the main menu.

1. All
All submenu items continuous check.

This menu checks 2 and subsequent items successively. At the item where visual check is required for judgment or an error occurred, the checking is suspended and the message is output for key entry. Normally, all items are checked successively one after another automatically unless an error is found.

Selecting 2 and subsequent items executes respective menus and outputs the results.

For the contents of each submenu, see "General Description of Checking Method" and "Check Items List".

General Description of Checking Method

2. Version
(2-2) Revision
       ROM revision number is displayed.
       Error: Not detected.
       The revision number defined in the source file of ROM (IC106 or 107) is displayed with four digits.

(2-3) ROM Check Sum
       Check sum is calculated.
       Error: Not detected.
       8-bit data are added up to the ROM (IC106 or 107) address 0x000F0000 to 0x002EFFFF, and the result is displayed with 4-digit hexadecimal number. Error is not detected. Compare the result with the specified value.

(2-4) Model Type
       Model code is displayed.
       Error: Not detected.
       The model code read from the EEPROM is displayed with 2-digit hexadecimal number.

(2-5) Region
       Region code is displayed.
       Error: Not detected.
       The region code determined from the model code is displayed.

(2-6) Mount resistance confirmation check
       Error 22: region code discord.
       Accordance between region codes, one is detected with model resistance and destination resistance, and the other is detected with region resistance, is check.
       If an error is detected, the region code determined with region resistance is displayed at "write data" and the region code determined with model resistance and destination resistance is displayed at "read data".

3. Peripheral
(3-2) EEPROM Check
       Data write → read, and accord check
       Error 03: EEPROM write/read discord.
       0x9249, 0x2942 and 0x4294 are written to the address 0x00 to 0xFF of the EEPROM and then read for checking. Before writing, the data are saved, then after checking, they are written to restore the contents of EEPROM.

(3-5) SACD check
       Device reset → internal organs RAM check
       Error 50: Write and read data discord.

(3-6) Venc Check (NS755V/NS915V)
       Data write → read, and accord check
       Error 52: Write and read data discord.
       Accessing to the SYSCON may be defective.

(3-7) ———— (not support)

(3-8) External RAM Check
       Test Data write → read, and accord check
       Error 02: The external RAM used in the system control is checked.

4. Servo
(4-2) Servo DSP Check
       Data write → read, and accord check
       Error 12: Read data discord
       0x9249, 0x2942 and 0x4294 are written to the RAM address 0x602 of the Servo DSP and then read for checking. Also, OPT type "1 LASER" or "2 LASER" is displayed.

(4-3) Check is not supported.

(4-4) RF Amp Register Check
       Date write → read and accord check
       Error 13: RF Amp resister write, and read data discord.
       After 0x01 is shifted to register which can read and write RF Amp for 8 bit operation, if write and read data are discord once, the check is performed unsuccessfully.
       There may be a single piece of hardware is defective, mounted imperfect or not mounted.

5. Supply

(5-2) ARP Register Check

Data write → read, and accord check

Error 08: ARP register write, and read data discord

Data 0x00 to 0xFF is written sequentially to the ARP TMAX register (address 0xC6) and then read for checking.

(5-3) ARP to RAM Data Bus

Data write → read, and accord check

Error 09: ARP ←→ RAM data bus error

Data 0x0001 to 0x8000 where one bit each is set to 1 are written to the address 0 of RAM (IC303) connected to the ARP (IC301) through the bus, then they are read and checked. In case of discord, written bit pattern and read data are displayed. If data where multiple bits are 1 are read, the bits concerned may touch each other. Further, if data where certain bit is always 1 or 0 regardless of written data, the line could be disconnected or shorted.

(5-4) ARP to RAM Address Bus

Data write → other address read discord check

Error 10: ARP ←→ RAM address bus error

Caution: Address and data display in case of an error is different from the display of other diagnosis (described later).

Before starting the test, all addresses of RAM (IC303) are cleared to 0x0000.

First, 0xA55A is written to the address 0x00000, and the address data are read and checked from addresses 0x00001 to 0x80000 while shifting 1 bit each. Next, the data at that address is cleared, and it is written to the address 0x00001, and read and checked in the same manner. This check is repeated up to the address 0x80000 while shifting the address data by 1 bit each.

If data other than 0 is read at the addresses except written address, an error is given because all addresses were already cleared to 0. In this check, the error display pattern is different from that of other diagnosis; read data, written address, and read address are displayed in this order. However, the message uses same template, and accordingly exchange Address and Data when reading. The following display, for example,

```
### Syscon Diagnosis ###




 5-4. ARP to RAM Address Bus
Error 10: ARP - RAM Address B
Address    : 0000A55A
Write Data : 00000000
Read Data  : 00080000
Press NEXT Key to Continue
Press PREV Key to Repeat

_
```

shows the data 0xA55A was read from address 0x00080000 though it was written to the address 0x00000000. This implies that these addresses are in the form of shadow. Also, if the read data is not 0xA55A, another error will be present.

(5-5) ARP RAM Check

Data write → read, and accord check

Error 11: ARP RAM read data discord

The program code data stored in ROM are copied to all areas of RAM (IC303) connected to the ARP (IC301) through the bus, then they are read and checked if they accord. If the detail check was selected initially, the data are written to all areas and read, then the same test is conducted once again with the data where all bits are inverted between 1 and 0. If discord is detected, faulty address, written data, and read data are displayed following the error code 11, and the test is suspended.

6. AV Decoder

(6-2) 1935 RAM

Data write → read, and accord check

Error 14: AVD RAM read data discord

The program code data stored in ROM (IC106 or 107) are copied to all areas of RAM (IC404, IC406) connected to the AVD (IC403) through the bus, then they are read and checked if they accord. Further, the same test is conducted once again with the data where all bits are inverted between 1 and 0. If discord is detected, faulty address, written data, and read data are displayed following the error code 14, and the test is suspended.

During the test, OSD display becomes blank as the OSD area is also checked.

(6-3) 1935 SP

ROM → AVD RAM → Video OUT

Error: Not detected.

The data including sub picture streams in ROM (IC106 or IC107) are transferred to the RAM (IC404, IC406) in AVD (IC403), and output as video signals from the AVD (IC403). Though OSD display becomes blank, the output of video signals continues until the key is pressed.

They are output from all video terminals (Composite, Y/C, Component) except EURO AV terminal.

7. Video

(7-2) Color Bar
AVD color bar command write → Video OUT
Error: Not detected.
The command is transferred to the AVD, and the color bar signals are output from video terminals.
They are output from all video terminals (Composite, Y/C, Component) except EURO AV terminal.

(7-3) Composite Out (AEP, UK, RUS Model)
EURO-AV Composite video output check
AVD color bar command write → Video (EURO-AV Composite) OUT
Error: Not detected.
With the Component of video output turned off, the color bar signals are output from the EURO-AV terminal.

(7-4) Y/C Out (AEP, UK, RUS Model)
EURO-AV Y/C video output check
AVD color bar command write → Video (EURO-AV Y/C) OUT
Error: Not detected.
With the Y/C of video output turned on, the color bar signals are output from the EURO-AV terminal.

(7-5) RGB Out (AEP, UK, RUS Model)
EURO-AV RGB video output check
AVD color bar command write → Video (EURO-AV RGB) OUT
Error: Not detected.
With the RGB of video output turned on, the color bar signals are output from the EURO-AV terminal.

(7-6) Component Out (AEP, UK, RUS Model)
EURO-AV Component video output check
AVD color bar command write → Video (EURO-AV Component) OUT
Error: Not detected.
With the Component of video output turned on, the color bar signals are output from the EURO-AV terminal.

(7-7) Euro AV Through (AEP, UK, RUS Model)
AV Through output On/Off
Error: Not detected.
AV Through output is turned on.

8. Audio

(8-2) ARP → 1935
Error 15 : ARP → 1935 video NG
      16 : ARP → 1935 audio NG

(8-3) Test Tone
Pink noise output
Error: not detected
Test tone is output, from only L and R2 channels of the model without DD output function, and from Ls and Rs of two channels of DD model.
After setting all outputs to ON, check for each channel is performed individually by pressing ▶▶❙ to switch the output channel.

Check Items List

2) Version
(2-2) Revision
(2-3) ROM Check Sum
(2-4) Model Type
(2-5) Region
(2-6) M't Check

3) Peripheral
(3-2) EEPROM Check
(3-5) SACD Check
(3-6) Venc Check (NS755V/NS915V)
(3-7) Not support
(3-8) External RAM check

4) Servo
(4-2) Servo DSP Check
(4-3) ———— (function not support)
(4-4) RF Amp Register Check

5) Supply
(5-2) ARP Register Check
(5-3) ARP to RAM Data Bus
(5-4) ARP to RAM Address Bus
(5-5) ARP RAM Check

6) AV Decoder
(6-2) 1935 RAM
(6-3) 1935 SP

7) Video
(7-2) Color Bar
(7-3) Composite Out (AEP, UK, RUS Model)
(7-4) Y/C Out (AEP, UK, RUS Model)
(7-5) RGB Out (AEP, UK, RUS Model)
(7-6) Component Out (AEP, UK, RUS Model)
(7-7) Euro AV Through (AEP, UK, RUS Model)

8) Audio
(8-2) ARP → 1935
(8-3) Test Tone

Error Codes List

00: Error not detected
01: RAM write/read data discord
03: EEPROM NG
04: Flash memory clear error
05: Flash memory write error
06: Flash memory read data discord
08: ARP register read data discord
09: ARP ←→ RAM data bus error
10: ARP ←→ RAM address bus error
11: ARP RAM read data discord
12: Servo DSP NG
13: RF Amp NG
14: SDRAM NG
15: ARP → 1935 video NG
16: ARP → 1935 audio NG
19: 1901UCODE Download NG
1A: System call error (function not supported)
1B: System call error (parameter error)
1C: System call error (illegal ID number)
20: System call error (time out)
22: Resistance incorrect mounting
50: SACD Decoder W/R NG
52: Video Encoder W/R NG
55: External RAM W/R NG
90: Error occurred
91: User verification NG
92: Diagnosis cancelled.

6-5

6-4. DRIVE AUTO ADJUSTMENT

On the Test Mode Menu screen, press $\boxed{1}$ key on the remote com-
mander, and the drive auto adjustment menu will be displayed.

```
   ## Drive Auto Adjustment ##

        Adjustment Menu

0.  ALL
1.  DVD-SL
2.  CD
3.  DVD-DL
4.  LCD



                   Exit: RETURN
```
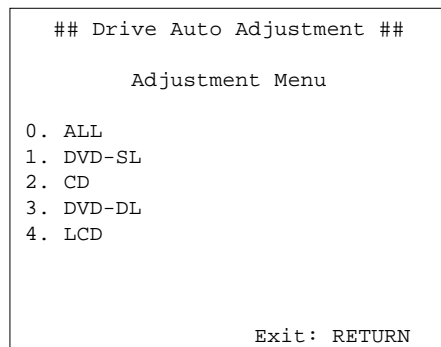
Normally, $\boxed{0}$ is selected to adjust DVD (single layer), CD, DVD
(dual layer) in this order. But, individual items can be adjusted for
the case where adjustment is suspended due to an error. In this
mode, the adjustment can be made easily through the operation
following the message displayed on the screen. Which disc is cur-
rently adjusted is displayed on the fluorescent display tube.
The disc used for adjustment must be the one specified for adjust-
ment.

0. ALL
You will be asked if EEPROM data are initialized or not, and for
this prompt, select $\boxed{0}$ and press the $\boxed{ENTER}$ key. First , the servo
setting data in EEPROM, Emergency History and Hour Meter are
cleared to initialize. Then, 1. DVD-SL disc, 2. CD disc, and
3. DVD-DL disc are adjusted in this order. Each time one disc was
adjusted, it is ejected, and therefore exchange the disc following
the message. You can exit the adjustment by pressing the $\boxed{\blacksquare}$ button.
In adjusting each disc, the mirror time is measured to check the
disk type. In the auto adjustment, whether the disc type is correct
is not checked unlike conventional models, and accordingly, take
care not to insert a different type of disc.

1. DVD-SL (single layer)
Select $\boxed{1}$, insert DVD single layer disc, and press $\boxed{ENTER}$ key,
and the adjustment will be made through the following steps, then
adjusted values will be written to the EEPROM.

DVD Single Layer Disc Adjustment Steps

1. Sled Reset
2. Disc Check Memory SL
3. Set Disc Type SL
4. Spdl Start
5. LD ON
6. Focus Error Check
7. Focus ON 0 with PI Level Musure
8. Auto Track Offset Adjust L0
9. Trv Level Check
10. Tracking ON
11. CLVA ON
12. Sled ON
13. Auto Focus Balance Adjust
14. Auto Loop Filter Offset Adjust
15. Auto Focus Gain Adjust L0
16. Auto Focus Balance Adjust L0
17. EQ Boost Adjust
18. Auto Loop Filter Offset Adjust
19. Auto Track Gain Adjust
20. RF Level Measure
21. Jitter Measure
22. Eep Copy Loop Filter Offset
23. All Servo Stop

2. CD
Select $\boxed{2}$, insert CD disc, and press $\boxed{\text{ENTER}}$ key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM.

CD Adjustment Steps

1. Sled Reset
2. Disc Check Memory CD
3. Set Disc Type CD
4. Spdl Start
5. LD ON
6. Focus Error Check
7. Fcs ON 0 with PI Level Mesure
8. Auto Track Offset Adjust L0
9. Trv Level Check
10. Tracking ON
11. CLVA ON
12. Sled ON
13. Auto focus Blance Adjust
14. Auto Loop Filter Offset Adjust
15. Auto Focus Gain Adjust L0
16. Auto Focus Balance Adjust L0
17. Eq Boost Adjust
18. Auto Loop Filter Offset Adjust
19. Auto Track Gain Adjust
20. Copy Adjustment Data to LCD
21. RF Level Measure
22. Jitter Measure
23. All Servo Stop

3. DVD-DL (dual layer)
Select $\boxed{3}$, insert DVD dual layer disc, and press $\boxed{\text{ENTER}}$ key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM.

DVD Dual Layer Disc Adjustment Steps

1. Sled Reset
2. Disc Check Memory DL
3. Set Disc Type DL
   DVD DL Layer 1 Adjust
4. Spdl Start
5. LD ON
6. Fcs ON 1 with PI Level Mesure
7. Auto Track Offset Adjust L1
8. Tracking ON
9. Clva ON
10. Sled ON
11. Auto Focus Balance Adjust
12. Auto Focus Gain Adjust L1
13. Auto Focus Balance Adjust L1
14. Eq Boost Adjust L1
15. Auto Track Gain Adjust L1
16. Jitter Measure
    DVD DL Layer 0 Adjust
17. Focus Jump (L1 → L0)
18. Auto Track Offset Adjust L0
19. Tracking ON
20. Clva ON
21. Sled ON
22. Auto Focus Balance Adjust
23. Auto Focus Gain Adjust L0
24. Auto Focus Balance Adjust L0
25. Eq Boost Adjust L0
26. Auto Track Gain Adjust L0
27. Jitter Measure
28. All Servo Stop

4. LCD (SACD)
No adjustments, because the adjusted data of CD are reflected to LCD disc and the adjusted data of CD and DVD-DL are reflected to SACD (hybrid disc).

6-5. DRIVE MANUAL OPERATION

On the Test Mode Menu screen, select ☐2, and the manual operation menu will be displayed. For the manual operation, each servo on/off control and adjustment can be executed manually.

```
  ## Drive Manual Operation ##

         Operation Menu
1. Disc type
2. Servo Control
3. Track/Layer Jump
4. Manual Adjustment
5. Auto Adjustment
6. Memory Check

0. Disc Check Memory

                 Exit: RETURN
```
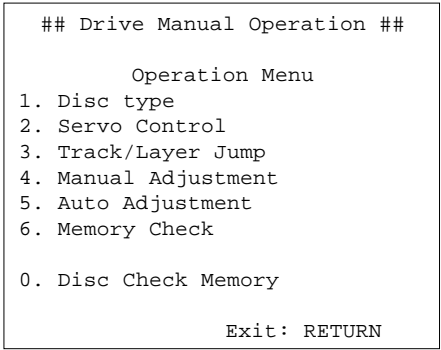
In using the manual operation menu, take care of the following points. These commands do not provide protection, thus requiring correct operation. The sector address or time code field is displayed when a disc is loaded.

```
1.  Set correctly the disc type to be used on the Disc Type
    screen.
    The disc type must be set after a disc was loaded.
    The set disc type is cleared when the tray is opened.
2.  After power ON, if the Drive Manual Operation was se-
    lected, first perform "Reset SLED TILT" by opening 1.
    Disc Type screen.
3.  In case of an alarm, immediately press the ■ button to
    stop the servo operation, and turn the power OFF.
```

Basic operation (controllable from front panel or remote commander)

I/⏻	Power OFF
■	Servo stop
⏏	Stop+Eject/Loading
⟲ RETURN	Return to Operation Menu or Test Mode Menu
▶▶I , I◀◀	Transition between sub modes of menu
☐1 to ☐9 , ☐0	Selection of menu items
Cursor ↓ / ↑	Increase/Decrease in manually adjusted value

0. Disc Check Memory

```
          Disc Check



1. SL Disc Check
2. CD Disc Check
3. DL Disc Check




0. Reset SLED TILT
```
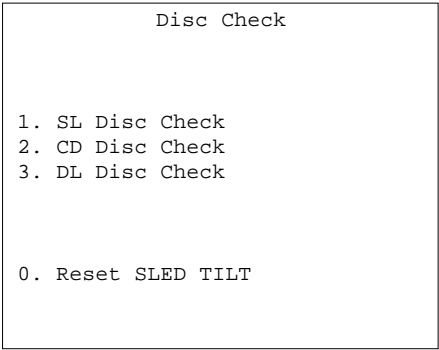
On this screen, the mirror time is measured and written to the EEPROM to check the disc type. First, set a DVD SL disc and press ☐1, then set a CD disc and press ☐2, and finally set a DVD DL disc and press ☐3. The measured mirror time is displayed respectively.

The adjustment must be executed more than once after default data were written.

From this screen, you can go to another mode by pressing ▶▶I or I◀◀ key, but you cannot enter this mode from another mode. You can enter this mode from the Operation Menu screen only.

1. Disc Type

```
          Disc Type
Disc Type
1. Disc Type Auto Check
2. DVD SL   12cm
3. DVD DL   12cm
4. CD       12cm
5. SACD     12cm
6. DVD SL    8cm
7. DVD DL    8cm
8. CD        8cm
9. LCD       8cm
0. Reset SLED TILT
                  EMG. 00
```
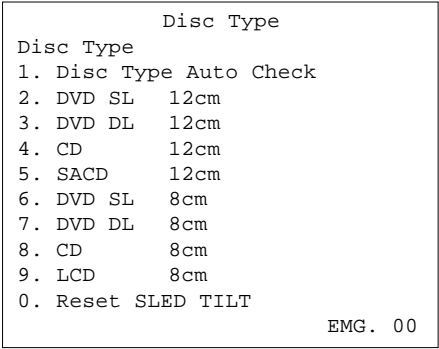
On this screen, select the disc type. To select the disc type, press the number of the loaded disc. The selected disc type is displayed at the bottom. Selecting ☐1 automatically selects and displays the disc type. In case of wrong display, retry "Disc Check Memory". Also, opening the tray causes the set disc type to be cleared. In this case, set the disc type again after loading.

In performing manual operation, the disc type must be set.

Once the disc type has been selected, the sector address or time code display field will appear as shown below. These values are displayed when PLL is locked.

```
          Disc Type
1. Disc Type Auto Check
2. DVD SL      12cm
3. DVD DL      12cm
4. CD          12cm
5. SACD        12cm
6. DVD SL       8cm
7. DVD DL       8cm
8. CD           8cm
9. LCD          8cm
0. Reset SLED TILT
SA.------ SI.-- EMG.00
DVD SL 12cm
```
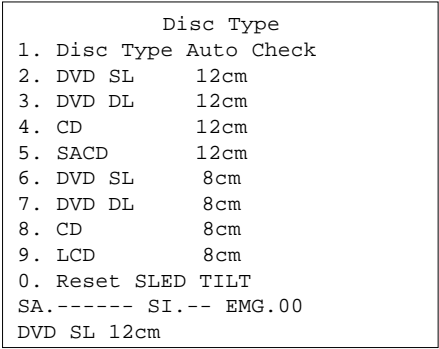
Display when DVD SL 12cm disc was selected

```
            Disc Type
1. Disc Type Auto Check
2. DVD SL    12cm
3. DVD DL    12cm
4. CD        12cm
5. SACD      12cm
6. DVD SL     8cm
7. DVD DL     8cm
8. CD         8cm
9. LCD        8cm
0. Reset SLED TILT
             TC. --:--:-- EMG.00
CD           12cm
```

Display when CD 12cm disc was selected

0	Reset SLED TILT	Reset the Sled and Tilt to initial position.(This model does not have Tilt device, so reset only the Sled to initial position.)
1	Disc Type Check	Judge automatically the loaded disc. As the judged result is displayed at the bottom of screen, make sure that it is correct. If Disc Check Memory menu has not been executed after EEPROM default setting, the disc type cannot be judged. In this case, return to the initial menu and make a check for three types of discs (SL, DL, CD).
2 to 9		Select the loaded disc. The adjusted value is written to the address of selected disc. No further entry is necessary if 1 was selected.

2. Servo Control

```
         Servo Control
1. LD        Off R. Sled FWD
2. SP        Off L. Sled REV
3. Focus     Off
4. TRK.      Off
5. Sled      Off
6. CLVA      Off
7. FCS. Srch Off


0. Reset SLED TILT
        SA.------ SI.-- EMG. 00
DVD SL 12 cm
```

On this screen, the servo on/off control necessary for replay is executed. Normally, turn on each servo from 1 sequentially and when CLVA is turned on, the usual trace mode becomes active. In the trace mode, DVD sector address or CD time code is displayed. This is not displayed where the spindle is not locked.
The spindle could run overriding the control if the spindle system is faulty or RF is not present. In such a case, do not operate CLVA.

0	Reset SLED TILT	Reset the Sled and Tilt to initial position.(This model does not have Tilt device, so reset only the Sled to initial position.)
1	LD	Turn ON/OFF the laser.
2	SP	Turn ON/OFF the spindle.

3	Focus	Search the focus and turn on the focus.
4	TRK	Turn ON/OFF the tracking servo.
5	Sled	Turn ON/OFF the sled servo. If PLL is not locked (or can not be locked), the sled servo does not be turned ON. (Indication remains as OFF)
6	CLVA	Turn ON/OFF normal servo of spindle servo.
7	FCS. Srch	Apply same voltage as that of focus search to the focus drive to check the focus drive system.
→	Sled FWD	Move the sled outward. Perform this operation with the tracking servo turned off.
←	Sled REV	Move the sled inward. Perform this operation with the tracking servo turned off.

3. Track/Layer Jump

```
    Tracking/Layer Jump
1. 1Tj FWD    R. Fj (L1 → L0)
2. 1Tj REV    L. Fj (L0 → L1)
3. 2Tj FWD    U. Lj (L1 → L0)
4. 2Tj REV    D. Lj (L0 → L1)
5. NTj FWD
6. NTj REV
7. 500Tj FWD
8. 500Tj REV
9. 10k/20k FWD
0. 10k/20k REV
        SA.------ SI.-- EMG. 00
DVD SL 12 cm
```

On this screen, track jump, etc. can be performed. Only for the DVD-DL, the focus jump and layer jump are displayed in the right field.

1	1Tj FWD	1-track jump forward.
2	1Tj REV	1-track jump reverse.
3	2Tj FWD	2-track jump forward.
4	2Tj REV	2-track jump reverse.
5	NTj FWD	N-track jump forward.
6	NTj REV	N-track jump reverse.
7	500Tj FWD	Fine search forward.
8	500Tj REV	Fine search reverse.
9	10k/20k FWD	Direct search forward.
0	10k/20k REV	Direct search reverse.

– The following commands are valid for DVD-DL disc only –

→	Fj (L1 → L0)	Focus jump forward. (Trk/Sled Servo OFF)

| ← | Fj (L0 → L1) | Focus jump reverse. |
| | | (Trk/Sled Servo OFF) |

| ↑ | Lj (L1 → L0) | Layer jump forward. |
| | | (Trk/Sled Servo ON) |

| ↓ | Lj (L0 → L1) | Layer jump reverse. |
| | | (Trk/Sled Servo ON) |

4. Manual Adjustment

```
    Manual Adjustment:Up/Down
1. TRK. Offset
2. Focus Gain
3. TRK. Gain
4. Focus Offset
5. Focus Balance
6. L.F. Offset
7. Analog FRSW
8. PLL Dac Gain
9. EQ BOOST
0. GD ADJ
Adjustment: Up/Down
      SA. ------ SI. -- EMG. 00
DVD SL 12cm              Jitter FF
```

On this screen, each item can be adjusted manually. Select the desired number ①1 to ⓪0 from the remote commander, and current setting for the selected item will be displayed, then increase or decrease numeric value with ↑ key or ↓ key. This value is stored in the EEPROM. If CLV has been applied, the jitter is displayed for reference for the adjustment.

1	TRK. Offset	Adjusts tracking offset.
2	Focus Gain	Adjusts focus gain.
3	TRK. Gain	Adjusts track gain.
4	Focus Offset	Adjusts focus offset.
5	Focus Balance	Adjusts focus balance.
6	L.F. Offset	Adjusts loop filter offset.
7	Analog FRSW	Sets the shifting switch for analog feedback circuit.
8	PLL Dac Gain	Adjusts PLL D/A converter gain.
9	EQ BOOST	Adjusts amount of boost of equalizer.
0	GD ADJ	Adjusts amount of group delay

5. Auto Adjustment

```
       Auto Adjustment
1. Auto TRK. Offset
2. Auto Focus Balance
3. Auto Focus Offset
4. Auto Focus Gain
5. Auto TRK. Gain
6. Auto EQ
7. Auto L.F. Offset
8. Auto Group Delay


SA.------ SI.-- EMG. 00
DVD SL 12 cm
```

On this screen, each item can be adjusted automatically. Select the desired number ①1 to ⑧8 from the remote commander, and selected item is adjusted automatically.

1	Auto TRK. Offset	Adjusts tracking offset.
2	Auto Focus Balance	Adjusts focus balance.
3	Auto Focus Offset	Adjusts focus offset.
4	Auto Focus Gain	Adjusts focus gain.
5	Auto TRK. Gain	Adjusts track gain.
6	Auto EQ	
7	Auto L.F. Offset	Adjusts loop filter offset.
8	Auto Group Delay	

6. Memory Check

Display images are shown as follows, and all three screens are able to switch.

```
EEPROM DATA 1        -- DL --
          CD LCD  SL  L0  L1
Focus Gain  xx xx  xx  xx  xx
TRK. Gain   xx xx  xx  xx  xx
FCS Balnce  xx xx  xx  xx  xx
Focus Bias  xx xx  xx  xx  xx
TRV Offset  xx xx  xx  xx  xx
L.F. Offset xx xx  xx  xx  xx
EQ. Boost   xx xx  xx  xx  xx

_
UP   : Last Data
DOWN : Next Data
CLEAR: Default Set    page.1/3
```

```
EEPROM DATA 2        -- DL --
          CD LCD  SL  L0  L1
RF Jitter   xx --  xx  xx  xx
RF Level    xx --  xx  --  --
FE Level    xx --  xx  --  --
FE Balance  xx --  xx  --  --
TRV.Level   xx --  xx  --  --
TE Gain     xx xx  --  --  --
PI Level    xx --  xx  xx  --

_
UP   : PREV Data
DOWN : Next Data
CLEAR: Default Set    page.2/3
```

```
EEPROM DATA 3          -- DL --
             CD LCD   SL  L0  L1
Analog FRSW  xx xx    xx  xx  xx
PLL Dac Gain xx xx    xx  xx  xx
Mirror Time  xx xx    xx  xx  xx

_   THR A&L    xx xx  xx/xx xx  xx
UP  : PREV Data
DOWN : First Data
CLEAR : Default Set      page.3/3
```

On this screen, current servo adjusted data stored in the EEPROM are displayed. The adjusted data are initialized by pressing the CLEAR key, but be careful that they are not recoverable after initialization.

Before clearing the adjusted data, make a note of the set data. This screen will also appear if 0 All is selected in the Drive Auto Adjustment. In this case, default setting cannot be made.

Data of "THR A & L" on page 3/3 can not be changed if default set is done.

6-6. MECHA AGING

```
      ### Mecha Aging ###




Press OPEN key




Abort: STOP key
```

On the Test Mode Menu screen, selecting 3 executes the aging of mechanism. First, open the tray and load a disc. Press the ▷ key, and the aging will start. During aging, the repeat cycle is displayed. Aging can be aborted at any time by pressing the ■ key. After the operation has stopped, unload the disc and press again the ■ key or the ↩ RETURN key to return to the Test Mode Menu.

6-7. EMERGENCY HISTORY

```
      ### EMG. History ###

Laser Hours     CD    xxhxxm
                DVD   xxhxxm


 1. 00 00 00 00 00 00 00 00
    00 00 00 00 00 00 00 00


 2. 00 00 00 00 00 00 00 00
    00 00 00 00 00 00 00 00

Select: 1-9    Scroll: UP/DOWN
(1: Last EMG.)  Exit: RETURN
```

On the Test Mode Menu screen, selecting 4 displays the information such as servo emergency history. The history information from last 1 up to 10 can be scrolled with ↑ key or ↓ key. Also, specific information can be displayed by directly entering that number with ten keys.

The upper two lines display the laser ON total hours. Data below minutes are omitted.

Clearing History Information
◎ Clearing laser hours
   Press DISPLAY and CLEAR keys in this order.
   Both CD and DVD data are cleared.
◎ Clearing emergency history
   Press TOP MENU and CLEAR keys in this order.
◎ Initializing set up data
   Press MENU and CLEAR keys in this order.
   The data have been initialized when "Set Up Initialized" message is displayed. The EMG. History screen will be restored soon.

6-8. VERSION INFORMATION

```
   ### Version Infomation ###

 IF con.      Ver.x.xxx(xxxx)
              Group     xx

 SYScon.      Ver.x.xxx(xxxx)
              Model     xx
              Region    0x


  Servo DSP Ver: x.xxx
  AVD ucode Ver: xxxxxxxx
  OPT TYPE : x LASER
 Exit : RETURN
```

The ROM version, region code, OPT type, etc. are displayed if
⑤ is selected in the Test Mode Menu.
The parenthesized hexadecimal number in the version number field
indicates the checksum value of the ROM.

Note : After down loading ROM data, sometimes it happens that
        checksum is not the same as that of ROM data which has
        been down loaded. In such a case, go back to the menu
        and select "0. Syscon Diagnosis", then select "1. All" in
        "2. Version". If the result of this operation does not give
        an agreement, it must be either Down Load error or ROM
        error.

6-9.   VIDEO LEVEL ADJUSTMENT

On the Test Mode Menu screen, selecting ⑥ displays color bars
for video level adjustment. During display of color bars, OSD dis-
appears but the menu screen will be restored if pressing any key.

6-10. IF CON SELF DIAGNOSTIC FUNCTION

1. IF-94 BOARD (IF CON) TEST MODE

The front board test mode is the IF CON self diagnostic mode.
The IF CON can diagnose the functions of the front panel boards
that the IF CON controls. Normally, the IF CON makes a serial
communication with the SYSTEM CONTROL and operates fol-
lowing the commands from the SYSTEM CONTROL, but in the
Test mode, the IF CON operates independently from the SYS-
TEM CONTROL.

In the Test mode, the following functions can be checked.
1. Button function
2. Remote commander receiving function
3. SYSTEM CONTROL-IF CON serial communication
4. Click shuttle function
5. Fluorescent display tube lighting check
    Grid check
    Anode check
6. LED control function

In the Test mode, the set operates same as usual, except voltage
monitoring, communication monitoring, display of fluorescent
display tube, and LED control.
1. The routine that monitors +3.3 V (P-CONT) of MB-105 board
    is not provided.
2. The monitoring timer for serial communication with the SYS-
    TEM CONTROL is not provided. The set is not placed in the
    Standby mode, even if the communication with SYSTEM
    CONTROL is normal.
3. Display of fluorescent display tube (normally, display is made
    following the commands from SYSTEM CONTROL)
4. LED control (normally, control is made following the com-
    mands from SYSTEM CONTROL)

2. OPERATION OF SELF CHECK MODE

The Self Check mode is the function to conduct the basic test to
the FL display and DVD panel section.

2-1. Self Check Mode Transition Processing

At the AC Power ON after IF CON (IC404) was reset, the input to
10pin (SELF CHECK) is judged and if "Low" is entered, the main
unit transits to the Self Check mode. In this port input judgment,
the result of 3-time attempts must be same (assuming that the MB-
105 and AV-64 boards are not connected). While pressing the ■ key
on the main unit with the IF CON in STANDBY mode, enter
↩ RETURN → DISPLAY (or SET UP) on the remote com-
mander, and the unit transits to the Self Check Mode. The Self
Check mode terminates when the IF CON transits to the STANDBY
mode.

2-2. Operation of Auto Self Check

When the Self Check mode becomes active at the AC Power ON
or by key input, the test display of the following steps (1) to (4) is
repeated.

(1) FLD and LED all ON (for 5 seconds)
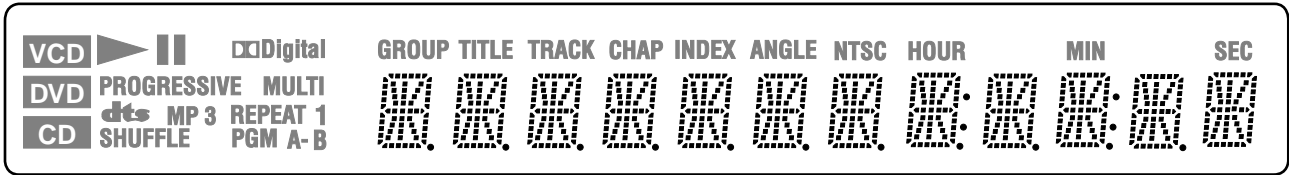
(2) MODEL display (for 2 seconds)
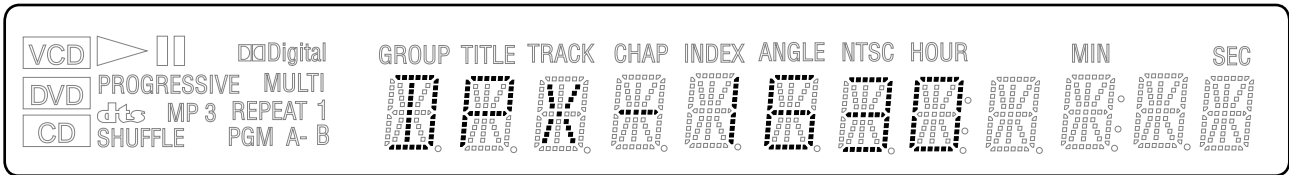
(3) Version display (for 2 seconds)
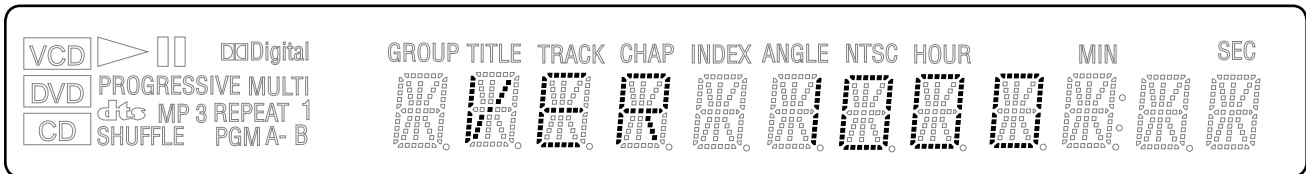
(4) ROM creation date display (for 2 seconds)
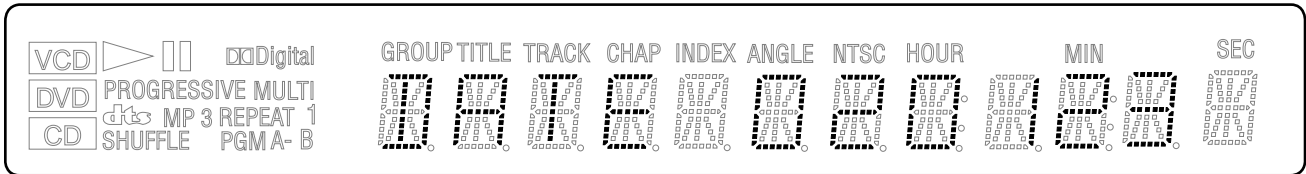
2-3. Each Self Check Function

Each Self Check function tests the FLD display, LED display, and key input.

Input Voltage [V]	IC404: Pin No. (Signal)				
	Pin ㉝ (CURSOR)	Pin ㉞ (O/C)	Pin ㉟ (PLAY)	Pin ㊱ (DISPLAY)	Pin ㊲ (POWER)
0 – 0.2	ENTER	OPEN/CLOSE	PLAY	STOP	POWER
0.6 – 0.82	DOWN	PREVIOUS	–	DISPLAY	TVS
1.16 – 1.47	LEFT	PAUSE	–	MENU	PVEQ
1.8 – 2.12	UP	NEXT	–	RETURN	–
2.48 – 2.7	RIGHT	–	–	TOP MENU	–
3.3	–	–	–	–	–

2-3-1. FLD and LED All ON
2-3-1-1. Transition Keys in Self Check Mode
- ■ key and ⏏ key on the main unit
- ← key on the main unit and the remote commander

2-3-1-2. Operation and Display
In this mode, all LEDs except STANDBY LED and all segments of FLD turn ON.
Example of FLD all ON
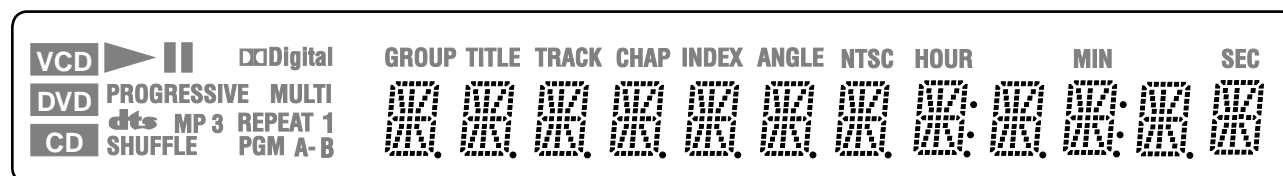
2-3-2. Main Unit Key Name Display and Key Code Display
2-3-2-1. Transition Keys in Self Check Mode
- Keys on main unit except keys transited in self check

2-3-2-2. Operation and Display
When a key on the main unit is pressed in the Self Check mode, the name of that key is displayed on the FLD. Also, the key name display and the key code display can be switched with the DISPLAY key on the remote commander. "NOTHING" is displayed when nothing is entered. Also, VIDEO CD, DVD, and CD segments turn on when a communication error occurred.

FLD display (at input of ▷ key on the main unit)

Key code display (at input of ▷ key, Key code: 0Ah)

VCD ▷ ‖ ‖ DDDigital GROUP TITLE TRACK CHAP INDEX ANGLE NTSC HOUR MIN SEC
DVD PROGRESSIVE MULTI
CD dts MP 3 REPEAT 1
SHUFFLE PGM A- B

KEY NO 0A
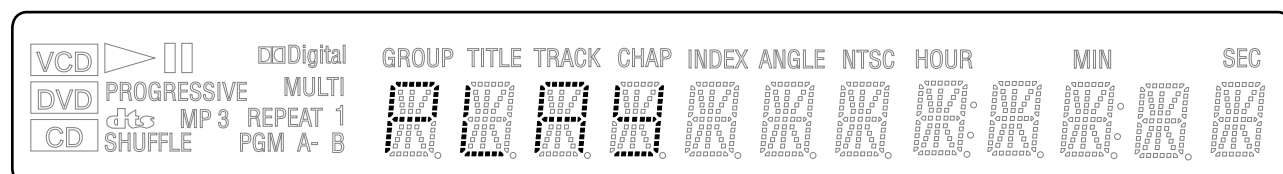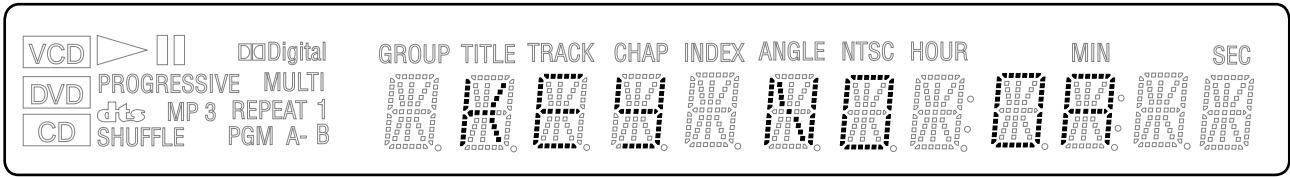
At input of faulty voltage

VCD ▷ ‖ ‖ DDDigital GROUP TITLE TRACK CHAP INDEX ANGLE NTSC HOUR MIN SEC
DVD PROGRESSIVE MULTI
CD dts MP 3 REPEAT 1
SHUFFLE PGM A- B

IGNORE
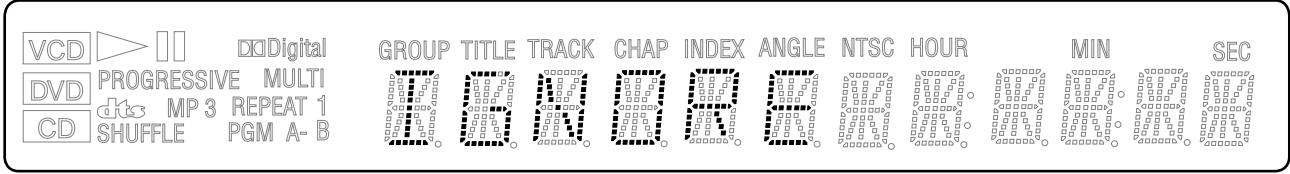
When two keys are pressed

VCD ▷ ‖ ‖ DDDigital GROUP TITLE TRACK CHAP INDEX ANGLE NTSC HOUR MIN SEC
DVD PROGRESSIVE MULTI
CD dts MP 3 REPEAT 1
SHUFFLE PGM A- B

DOUBLE
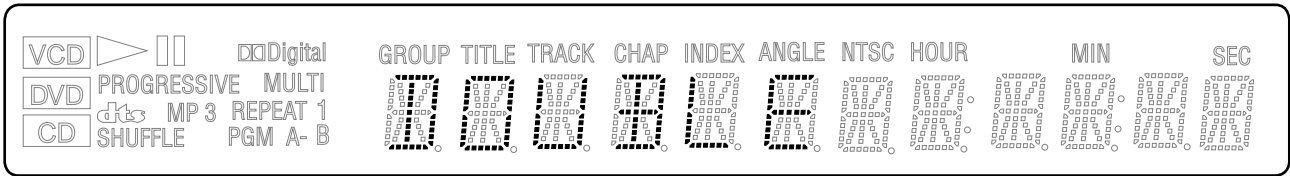
2-3-3. Remote Commander Key Name Display and Key Code Display
2-3-3-1. Transition Keys in Self Check Mode
• Remote commander keys except keys transited in self check

2-3-3-2. Operation and Display
When a key on the remote commander is pressed in the Self Check mode, the name of that key is displayed on the FLD. Also, the key name display and the key code display can be switched with the DISPLAY key on the remote commander. "NOTHING" is displayed when nothing is entered. Also, VIDEO CD, DVD, and CD segments turn on when a communication error occurred.

Remote commander key name display (at input of ‖ key)

VCD ▷ ‖ ‖ DDDigital GROUP TITLE TRACK CHAP INDEX ANGLE NTSC HOUR MIN SEC
DVD PROGRESSIVE MULTI
CD dts MP 3 REPEAT 1
SHUFFLE PGM A- B

PAUSE
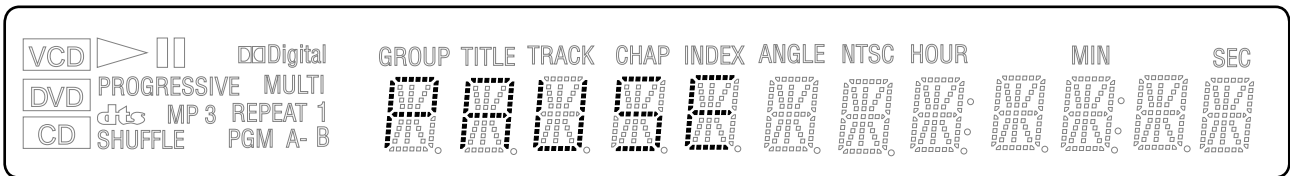
Remote commander key code display (at input of ‖ key, Key code: 39h)

VCD ▷ ‖ ‖ DDDigital GROUP TITLE TRACK CHAP INDEX ANGLE NTSC HOUR MIN SEC
DVD PROGRESSIVE MULTI
CD dts MP 3 REPEAT 1
SHUFFLE PGM A- B

REM NO 39
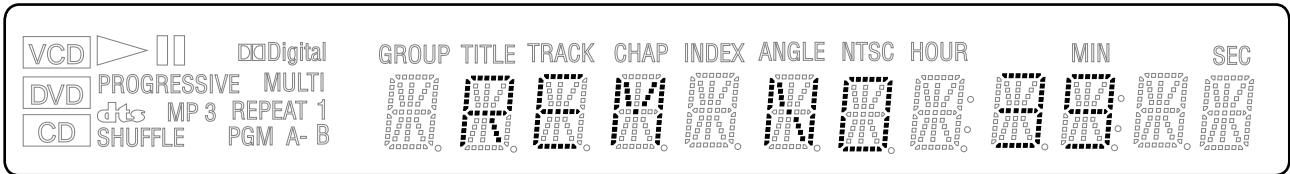
2-3-4. Communication Monitoring Display

The communication state is monitored and displayed while the key name on the main unit and the remote commander is displayed. When the communication to the System Controller failed, VIDEO CD, DVD, and CD segments turn on.

Communication error display (at no key input)
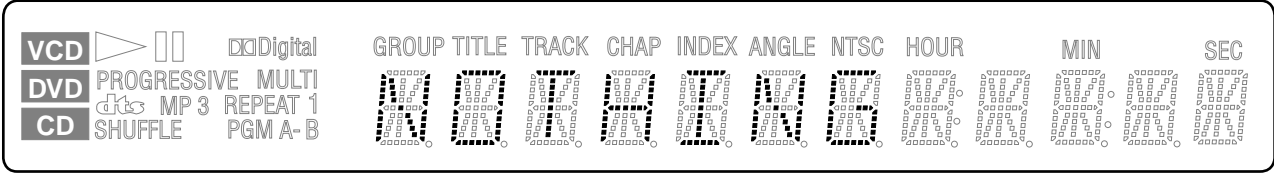
Communication error display (at code display without input of the remote commander)
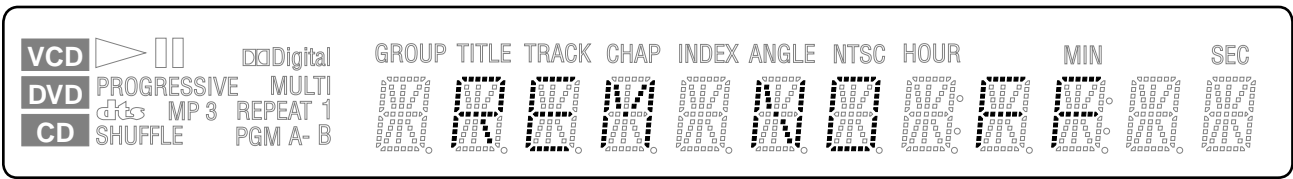
2-3-5. FLD Anode Test Display and SHUTTLE Click Operation Test

2-3-5-1. Transition Keys in Self Check Mode

- → on the main unit and the remote commander
- SHUTTLE on the remote commander during Anode Test display

  (This model does not provide JOG/SHUTTLE, and therefore use another DVD remote commander having the JOG/SHUTTLE)

2-3-5-2. Operation and Display

The Self Check mode transits to this mode when → key is entered. Only the first segment of each grid of FLD turns on, and each time the SHUTTLE is entered, the segment of each grid is switched in order. When SHUTTLE input is clockwise, the segment switches in 1 → 2 → 3 direction, or counterclockwise it switches in 3 → 2 → 1 direction. This tests whether each segment turns on individually.

Display at the start of Anode Test
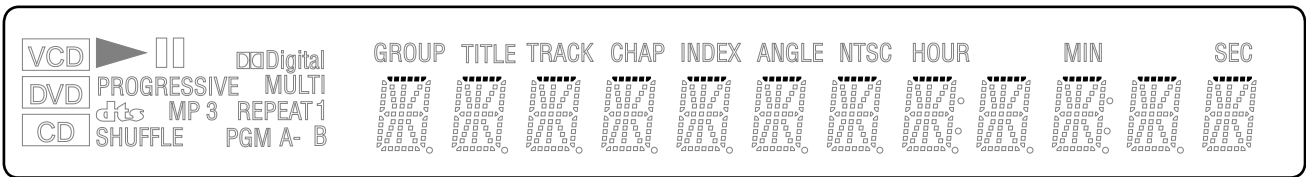
↓   (Input in CW direction)
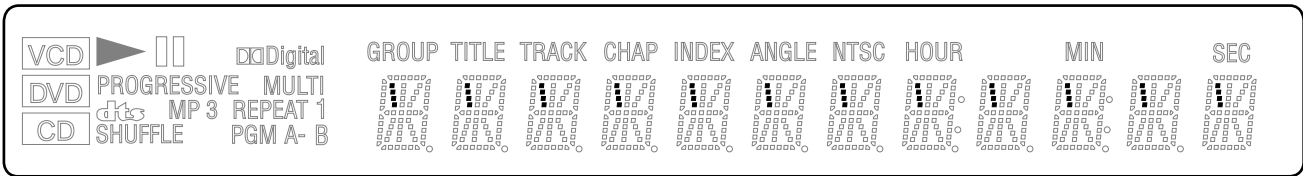
2-3-6. FLD Grid Test Display and SHUTTLE Click Operation Test

2-3-6-1. Transition Keys in Self Check Mode

- ↑ on the main unit and the remote commander
- SHUTTLE on the remote commander during Grid Test display (This model does not provide JOG/SHUTTLE, and therefore use another DVD remote commander having the JOG/SHUTTLE)

2-3-6-2. Operation and Display

The Self Check mode transits to this mode when ↑ key is entered. The first grid of FLD all turns on and other grids turn off. Each time the SHUTTLE is entered, the grid is switched in order. When SHUTTLE input is clockwise, the grid switches in 1 → 2 → 3 direction, or counterclockwise it switches in 3 → 2 → 1 direction. This tests whether each grid turns on individually.

Display at the start of Grid Test

↓ (Input in CW direction)
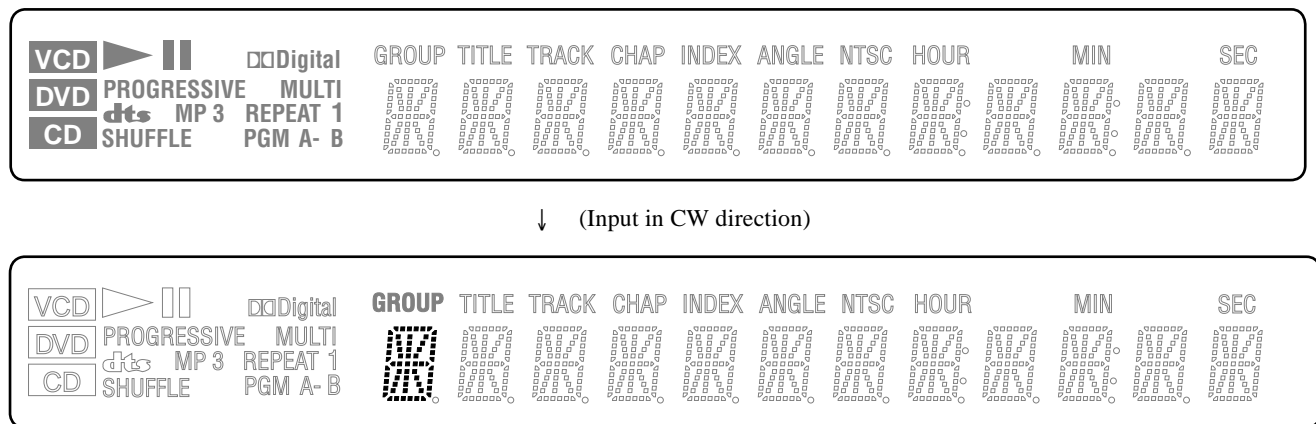
2-3-7. LED Test Display

2-3-7-1. Transition Keys in Self Check Mode

- ↓ on the main unit and the remote commander
- SHUTTLE on the remote commander during LED Test display (This model does not provide JOG/SHUTTLE, and therefore use another DVD remote commander having the JOG/SHUTTLE)

2-3-7-2. Operation and Display

LED is switched in order by the input of JOG/SHUTTLE. Also, LED ON/OFF is switched by the input of same key as the function that turns on the LED concerned.

FLD display during LED Test
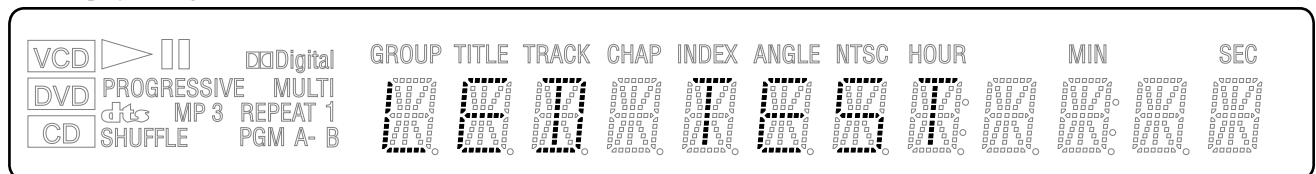
2-3-8. Beep Sound Test

2-3-8-1. Transition Keys in Self Check Mode

- Input of a key on main unit

2-3-8-2. Operation and Display

In the Self Check mode, each time a key on the main unit is entered, a beep sound of 1kHz (100ms) is generated.
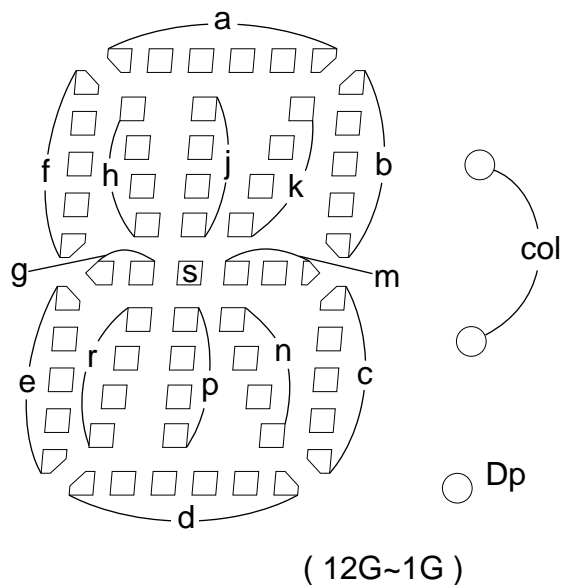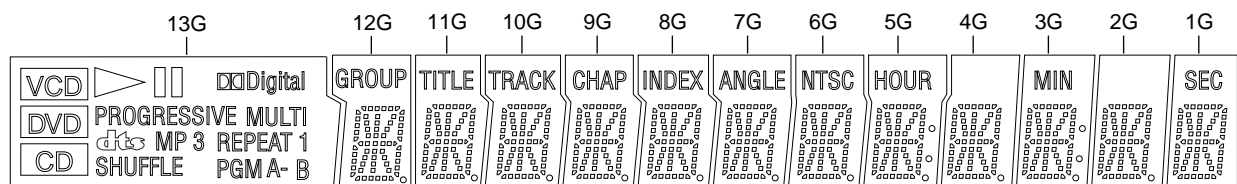
(12G~1G)

ANODE CONNECTION

	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	▷	a	a	a	a	a	a	a	a	a	a	a	a
P2	‖	h	h	h	h	h	h	h	h	h	h	h	h
P3	—	j	j	j	j	j	j	j	j	j	j	j	j
P4	Digital	k	k	k	k	k	k	k	k	k	k	k	k
P5	PROGRESSIVE	b	b	b	b	b	b	b	b	b	b	b	b
P6	—	f	f	f	f	f	f	f	f	f	f	f	f
P7	MULTI	m	m	m	m	m	m	m	m	m	m	m	m
P8	dts	s	s	s	s	s	s	s	s	s	s	s	s
P9	MP 3	g	g	g	g	g	g	g	g	g	g	g	g
P10	REPEAT	e	e	e	e	e	e	e	e	e	e	e	e
P11	1	n	n	n	n	n	n	n	n	n	n	n	n
P12	SHUFFLE	p	p	p	p	p	p	p	p	p	p	p	p
P13	PGM	r	r	r	r	r	r	r	r	r	r	r	r
P14	A-	c	c	c	c	c	c	c	c	c	c	c	c
P15	B	d	d	d	d	d	d	d	d	d	d	d	d
P16	VCD	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	-	Dp	Dp
P17	DVD	-	-	-	-	-	-	-	col	-	col	-	-
P18	CD	GROUP	TITLE	TRACK	CHAP	INDEX	ANGLE	NTSC	HOUR	-	MIN	-	SEC

6-18

6-11. TROUBLESHOOTING
6-11-1. Cannot Enter Test Mode
You cannot enter the Test mode when either button has been pressed by any reason with the board assembled in the front panel. In this state, the power does not turn on even under normal condition (the unit is kept in standby state), and also no button is active and the remote commander is not accepted. In this case, disconnect the MB-105 board and AV-64 board, and with the SELF CHECK (pin ⑩) of IF CON (IC404) on the IF-94 board kept in low state, supply AC, and the IF CON self-diagnosis mode will be forcibly activated. The IF CON (IC404) checks the SELF CHECK port only after the power on reset (only at AC supply, not in standby state). If any button is pressed, its name is displayed on the fluorescent display tube. But, if other than "NOTHING" is displayed though no button is pressed, it means that any button has been pressed.

6-11-2. Faults in Test Mode (MB-105 board)
1. The test mode menu is not displayed.
1-1. Board visual check
Check that the ICs of SYSCON (IC104), ROM (IC106 or IC107), AVD (IC403), ARP & SERVO (IC301) are working correctly.
Check that outside appearance of the ICs is normal.
Check that IC pins are not short-circuited.
Check that there is no soldering error.
Check that outside appearance of the capacitors and resistors is normal.

1-2. Power supply voltage check
Check the power voltage of the power connector (CN101).
Check the power voltage of SYSCON (IC104).
Check the power voltage of ROM (IC106 or IC107).
Check the power voltage of AVD (IC403).
Check the power voltage of ARP & SERVO (IC301).
If the power voltage has any abnormality →
   Check that the power supply lines are not shorted.
   Check that there is no soldering error.
If any abnormality cannot be found still →
   Check that each IC is working normally.

1-3. Clock signal check
Measure the clock signal frequency at CPUCK (CL101) of SYSCON (IC104) with an oscilloscope.
If the 8.25 MHz signal appears. → Check the machine according to section 1-3-1
If the 33 MHz signal appears. → Check the machine according to section 1-3-2.
If other frequencies are output.
   R110 and R113 have defective soldering, X101 crystal oscillator is defective.
If the measurement point is fixed to either "H" or "L". →
   Observe XFRRST (pin-⑦⑥) of SYSCON (IC104) with an oscilloscope.
   If the measurement point is "L", check the following items.
If the IC has defective soldering, if the IC is short-circuited.
If the measurement point is "H",
     → Component X101 or SYSCON (IC104) is defective.

1-3-1. When the 8.25 MHz signal appears at CPUCK
• Check the XRD, XWRH and CS0X signal.
   Observe XRD (pin-⑦⓪), XWRH (pin-⑦①), and CS0X (pin-⑤⑧) of SYSCON (IC104) with an oscilloscope.
   If these pins are fixed to either "L" (0V) or "H" (3.3V), or if these pins stay in the center voltage, check the followings.
     Check if the signal line does not have the defective soldering.
     Check if the signal line is short-circuited with other signal lines.
     If you cannot find any problem → SYSCON (IC104) is defective.
• HA [0 to 21] signal and HD [0 to 15] signal check
   Observe HA [0 to 21] (pins-⑩② to ⑩⑨, ⑪① to ⑪⑧, ⑫⓪, ①to ⑤) of SYSCON (IC104) and HD [0 to 15] (pins-⑧⑤ to ⑩⓪) with an oscilloscope.
   If these pins are fixed to either "L" (0V) or "H" (3.3V), or if the HA pin stays in the center voltage, check the followings. (HD stays in the center voltage when it is normal.)
     → Check if the signal line does not have the defective soldering, or is short-circuited with other signal line or SYSCON (IC104) is defective.
• Reset signal check
   Check if XFRRST (pin-⑦⑥) of SYSCON (IC104) normal or not.
   The signal starts up at the same time as Vcc → Defective soldering.

If the trouble does not apply to any of the above-described phenomenon, SYSCON (IC104) or ROM (IC106 or IC107) is defective.

1-3-2. When the 33 MHz signal appears at CPUCK

- WAIT signal check

  Observe XWAIT (pin-㉗) of SYSCON (IC104) with an oscilloscope.

  If it is fixed to "L" (0V). → Observe CS2X to CS5X (pins-⑥⓪ to ㉖).

  If CS2X or CS3X is "L". → AVD (IC403) has defective soldering or AVD is defective.

  If CS4x or CS5X is "L". → ARP & SERVO (IC301) has defective soldering or ARP & SERVO is defective.

  If any one of the above is not "L". → XWAIT or CSnX is short-circuited or has the defective soldering or AVD (IC403) is defective or ARP & SERVO (IC301) is defective.

  Center voltage → The XWAIT line has defective soldering or is short-circuited or AVD (IC403) is defective or ARP & SERVO (IC301) is defective or SYSCON (IC104) is defective.

- CSnX signal check

  Observe CS0X to CS5X (pins-㉘ to ㉖) of SYSCON (IC104) with an oscilloscope.

  If they are fixed to "L" (0V) or if to center voltage → Check that the ICs do not have the defective soldering or is short-circuited with the other signal lines or SYSCON (IC104) is defective.

  CS0X: ROM (IC106 or IC107)
  CS2X, CS3X: AVD (IC403)
  CS4X, CS5X: ARP & SERVO (IC301)

If the trouble symptom does not apply to any of the above phenomenon, SYSCON (IC104) or ROM (IC106 or IC107) is defective.

2. Test mode menu is displayed but the machine stops when menu is selected

2-1. AVD (IC403) check

Observe SDCLKO (pin-㉗) of AVD (IC403) with an oscilloscope.

95 MHz → No problem

27 MHz → Observe the XRST, HA, HD, XRD, XWRH INT and CS signal waveform at the respective pins of AVDEC, AVD (IC403) is defective.

If the signal is other than the above frequencies → AVD (IC403) 27MHz signal line (CLKI (pin-㉖), SCLKIN (pin-㉗)) is short-circuited, IC mount is defective, AVD (IC403) is defective, PLL (IC103) is defective.

2-2. INT signal check

Observe INT0 to 2 (pins-⑯ to ⑱) of SYSCON (IC104) with an oscilloscope.

If they are fixed to "L" (0V) or fixed to the center voltage → Check that the ICs do not have the defective soldering, or are short-circuited, SYSCON (IC104) is defective, or the following ICs are not defective.

INT0: AVD (IC403)
INT1, INT2: ARP & SERVO (IC301)

2-3. If any abnormality cannot be confirmed by the above-described checks, check the CS signal that is currently output.

The CS signal other than CS0X is being output. → IC mount is defective or the IC is defective depending on the moving CS signal.

CS2X, CS3X: AVD (IC403)
CS4X, CS5X: ARP & SERVO (IC301)

If the trouble is not applicable to any of the above phenomenon, SYSCON (IC104) or ROM (IC106 or IC107) is defective.

3. If the message "SDSP No Ack" appears after the menu is displayed.

3-1. ARP & SERVO clock signal check

Check frequency of CLKIN (pin-⑮⓪)

33 MHz → Normal

Frequency other than 33 MHz → CLKIN is short-circuited or defective soldering or PLL (IC103) is defective or ARP & SERVO (IC301) is defective

3-2. ARP & SERVO (IC301) PLL oscillation check

Observe PLCKO (pin-㉘) of ARP & SERVO (IC301) with an oscilloscope.

If the pin is fixed to either "L" (0V) or "H" (3.3V).

If XRST if fixed to "L". XRST has the defective soldering, In all other cases. ARP & SERVO (IC301) is defective

If it is oscillating.

HA [0 to 7] are HD [8 to 15] are short-circuited, check XSDSPIT and XSDSPCS or ARP & SERVO (IC301) is defective.

4. If trouble occurs at the specific item of the "Diag All Check".

IC mount of the NG item is defective or IC is defective.

5. Picture and audio are not output.

Check connection of CN601 (AEP, UK, RUS) CN602

Check for the defective connection of flat cable and check of damage of the flat cable.

6. Picture is output but audio is not output.

Check the audio data output (at pins-㉔, ㉘, and ㉙) of AVD (IC403)

The audio data is not output. → AVD (IC403) or audio DAC (IC502, 504) mount is defective or power supply is defective or AVD (IC403) or audio DAC (IC502, 504) is defective.

PLL (IC103) 512fs output check

If the frequency or waveform has abnormality. → The signal line has defective soldering or the signal line is short-circuited with other signal lines or PLL (IC103) is defective.

7. Audio is output but picture is not output. (EXCEPT NS705V)

Observe pins-�37, �38, �39, ㊷, ㊸ and ㊹ of VDAC (IC604) with an oscilloscope.

If the analog signal is not output. → The signal line has the defective soldering or is short-circuited or parts are defective or VDAC (IC604) is defective.

Audio is output but picture is not output. (NS705V)

Observe pins-㊺, ㊼, ㊾, ㊿, ㉖ and ㉖ of AVD (IC403) with an oscilloscope.

If the analog signal is not output. → The signal line has the defective soldering or is short-circuited or parts are defective or AVD (IC403) is defective.

6-11-3. Drive Auto Adjustment stops due to error.

The ARP & SERVO (IC301) analog circuit of MB-105 board is defective or RF-Amp (IC201) or M-Driver (IC202) peripheral circuit is defective or optical pickup block is defective or flat cable connection is defective

6-11-4. The product itself is defective.

• If MB-105 does not have any problem,

The board other than MB-105 board is defective or connection is defective or optical pickup block is defective or mechanism deck is defective

1. Power LED does not light in Red when the AC power is turned on.

Check the EVER –13V (pin-③), EVER+3.3V (pin-⑪), +11V (AUDIO) (pin-⑬) voltage of the power supply block CN201.

If voltage is abnormal. → The power supply block is defective.

2. Power LED does not light in green after transmitting the POWER on command. It remains lighting in red (in the STANDBY mode).

2-1. Check the EVER -13V (pin-③), EVER+3.3V (pin-⑪), +11V (AUDIO) (pin-⑬) voltage at CN201 of the power supply block/

If voltage is abnormal. → The power supply block is defective.

2-2. Check if the fuse on the IF board has blown of not.

If the fuse has blown → Replace the fuse.

2-3. Check the P-CONT (pin-②) at CN401 of the IF-94 board when the POWER button is pressed.

If it remains at "L",

→ The signal line has the defective soldering or it is short-circuited with other signal lines or capacitor or resistor is defective or IFCON is defective or connection between the power supply block and the IF-94 board is defective, or connector installation is defective, or the power supply block is defective.

2-4. Check if the button is kept depressed in the IFCON self mode.

If the button is kept depressed. → The front panel is defective, or IF-94 board is defective.

2-5. Check PONCHK (pin-㉚) of IFCON (IC404) on the IF-94 board.

If it is 0.5 V or more. → The power supply is defective, or IF-94 board is defective.

3. Power LED becomes red (STANDBY mode) in at once through Power LED lights in Green once when the POWER button is pressed.

3-1. Check CN201 voltage of the power supply block when the LED lights in green.

If voltage is abnormal. → The power supply block is defective, or the IF-94 board is defective, or MB-105 is defective

3-2. Check XFRRST (pin-⑨) at CN101 on the MB-105 board.

If it is fixed to "L". → The signal line has defective soldering, or is short-circuited with other signal lines, or parts are defective.

3-3. Check IFBSY (pin-⑩), XIFCS (pin-⑪), SI0 (pin-⑫), SO0 (pin-⑬) and SC0 (pin-⑭) at CN101

If they are fixed to "H" or "L".

→ The signal line has defective soldering, or is short-circuited with other signal line, or parts are defective, or SYSCON (IC104) is defective

If they change between "L/H".

Connector installation is defective, or the IF-94 board is defective, or SYSCON (IC104) is defective.

If they stay in the center voltage.

Poor connection of flexible wiring board such as it is inserted in an angle diagonally, or defective soldering, or is short-circuited with other signal line.

3-4. Check PONCHK (pin-㉚) of IFCON (IC404) on the IF-94 board.

If rise-up time from 0.5 V to 1.5 V or more takes longer time, or it does not exceed 1.5 V or more. → The IF board is defective.

4. The LED lights in green but the FL display does not light when the POWER button is pressed.

Connection between the power supply block and the IF-94 board is defective, or connector installation is defective, or the IF-94 board is defective.

5. Both picture and audio are not output.

Connection between the power supply block and the IF-94 board is defective, or connection between the IF-94 board and the AV-64 board is defective, or connection between the AV-64 board and the MB-105 board is defective, or connector installation is defective, or AV-64 board is defective.

6. Picture is not normal. (Block noise or others appear.)

The MB-105 board AVD (IC403) or SDRAM (IC404, IC405) is defective, or ARP & SERVO (IC301) is defective.

SECTION 7
ELECTRICAL ADJUSTMENT

In making adjustment, refer to 7-6. Adjustment Related Parts Arrangement.

Note: During diagnostic check, the characters and color bars can be seen only with the NTSC monitor. Therefore, for diagnostic check, use the monitor that supports both NTSC and PAL modes.
Use the reference disc for PAL for check, and use the reference disc for NTSC for adjustment.

This section describes procedures and instructions necessary for adjusting electrical circuits in this set.

Instruments required:
1) Color monitor TV
2) Oscilloscope 1 or 2 phenomena, band width over 100 MHz, with delay mode
3) Frequency counter (over 8 digits)
4) Digital voltmeter
5) Standard commander (RMT-D146P/D147A/D147E/D1470/D147P)
6) DVD reference disc
   HLX-501 (J-6090-071-A) (dual layer) (NTSC)
   HLX-503 (J-6090-069-A) (single layer) (NTSC)
   HLX-504 (J-6090-088-A) (single layer) (NTSC)
   HLX-505 (J-6090-089-A) (dual layer) (NTSC)
   HLX-506 (J-6090-077-A) (single layer) (PAL)
   HLX-507 (J-6090-078-A)(dual layer) (PAL)
7) SACD reference disc
   HLXA-509 (J-6090-090-A)
8) Extention Cable (J-6090-107-A)

7-1. POWER SUPPLY CHECK

1. ETXNY393N2F Board : NS705V/NS905V/ NS915V: HK, SP, MY, TH, PH, IA, VTM, KR
HS12S1U Board : NS755V/NS915V: TW
HS12S1F Board : NS915V: LA

Mode	E-E
Instrument	Digital voltmeter
EVER +3.3 V Check	
Test point	CN201 pin ⑪
Specification	3.5 ± 0.2 Vdc
SW +3.3 V Check	
Test point	CN201 pin ⑧
Specification	3.5 ± 0.2 Vdc
+5 V Check	
Test point	CN201 pin ⑫
Specification	5.0 ± 0.3 Vdc
SW +11 V Check	
Test point	CN201 pin ⑥, ⑦
Specification	11.0 ± 1.0 Vdc
+11 V (AUDIO) Check	
Test point	CN201 pin ⑬
Specification	11.0 ± 1.0 Vdc
EVER −13 V Check	
Test point	CN201 pin ③
Specification	−13.0 ± 1.0 Vdc

Checking method:
1) Confirm that each voltage satisfies the specification.

⚠Caution
Never touch the heat sink that is the primary part. It is feared that you may get an electric shock.

- Abbreviation
  AUS : Australian model
  CND : Canadian model
  EA : Saudi Arabia model
  HK : Hong Kong model
  IA : Indonesia model
  KR : Korean model
  LA : Latin-America model
  ME : Middle East model
  MY : Malaysia model
  NZ : New Zealand model
  PH : Philippines model
  RUS : Russian model
  SP : Singapore model
  TH : Thailand model
  TW : Taiwan model
  VTM : Vietnam model

7-2. ADJUSTMENT OF VIDEO SYSTEM

1. Video Level Adjustment (MB-105 BOARD)
<Purpose>
This adjustment is made to satisfy the NTSC standard, and if not adjusted correctly, the brightness will be too large or small.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	LINE OUT (VIDEO) connector (75 Ω terminated)
Instrument	Oscilloscope
Adjusting element	RV401 (NS705V) RV601 (Except NS705V)
Specification	$1.00\,^{+0.04}_{-0.02}$ Vp-p

Adjusting method:
1) In the test mode initial menu "6" Video Level Adjustment, set so that color bars are generated.
2) Adjust the RV601 (or RV401) to attain $1.00\,^{+0.04}_{-0.02}$ Vp-p.

$1.00\,^{+0.04}_{-0.02}$ Vp-p
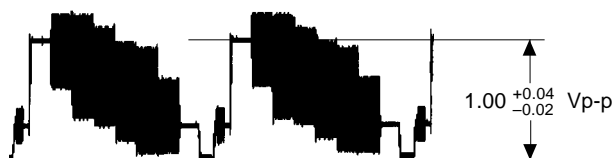
Figure 7-1

2. Progressive Video Output Level Adjustment (MB-105 BOARD) (Except NS705V)
<Purpose>
This adjustments progressive video output. If it is incorrect, correct brightness will not be attained when connected to, for instance, projector.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	COMPONENT VIDEO OUT (Y) connector (75 Ω terminated)
Instrument	Oscilloscope
Adjusting element	RV602
Specification	$1.00\,^{+0.04}_{-0.02}$ Vp-p

Adjusting method:
1) In the test mode initial menu "7" Prog Level Adjustment, set so that color bars are generated.
2) Adjust the RV602 to attain $1.00\,^{+0.04}_{-0.02}$ Vp-p

$1.00\,^{+0.04}_{-0.02}$ Vp-p

Figure 7-2

3. Checking S Video Output S-Y
<Purpose>
Check S-terminal video output. If it is incorrect, pictures will not be displayed correctly in spite of connection to the TV with a S-terminal cable.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	S VIDEO OUT (S-Y) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	1.00 ± 0.05 Vp-p

Checking method:
1) In the test mode initial menu "6" Video Level Adjustment, set so that color bars are generated.
2) Confirm that the S-Y level is 1.00 ± 0.05 Vp-p.

1.00 ± 0.05 Vp-p

Figure 7-3

4. Checking S Video Output S-C
<Purpose>
This checks whether the S-C satisfies the NTSC Standard. If it is not correct, the colors will be too dark or light.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	S VIDEO OUT (S-C) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	A = 286 ± 30 mVp-p (NTSC)

Checking method:
1) In the test mode initial menu "6" Video Level Adjustment, set so that color bars are generated.
2) Confirm that the S-C burst is "A".

A
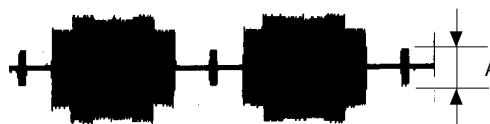
Figure 7-4

5. Checking Component Video Output Y

\<Purpose\>

This checks component video output Y. If it is incorrect, correct brightness will not be attained when connected to, for instance, projector.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	COMPONENT VIDEO OUT (Y) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	1.00 ± 0.05 Vp-p

Checking method:

1) In the test mode initial menu "6" Video Level Adjustment, set so that color bars are generated.
2) Confirm that the Y level is 1.00 ± 0.05 Vp-p.

1.00 ± 0.05 Vp-p

Figure 7-5

6. Checking Component Video Output B-Y

\<Purpose\>

This checks component video output B-Y. If it is incorrect, correct colors will not be displayed when connected to, for instance, projector.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	COMPONENT VIDEO OUT (P$_B$) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	A = 646 ± 50 mVp-p (For US, Canadian, E) A = 700 ± 50 mVp-p (Others)

Checking method:

1) In the test mode initial menu "6" Video Level Adjustment, set so that color bars are generated.
2) Confirm that the B-Y level is A.

A
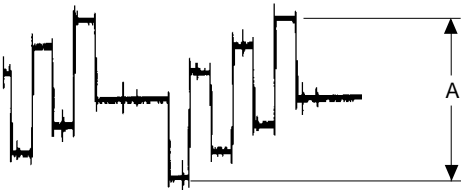
Figure 7-6

7. Checking Component Video Output R-Y

\<Purpose\>

This checks component video output R-Y. If it is incorrect, correct colors will not be displayed when connected to, for instance, projector.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	COMPONENT VIDEO OUT (P$_R$) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	B = 646 ± 50 mVp-p (For US, Canadian, E) B = 700 ± 50 mVp-p (Others)

Checking method:

1) In the test mode initial menu "6" Video Level Adjustment, set so that color bars are generated.
2) Confirm that the R-Y level is B.

B
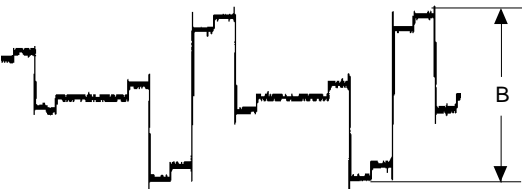
Figure 7-7

7-3. ADJUSTMENT RELATED PARTS ARRANGEMENT

MB-105 BOARD (SIDE A)

IC403

RV401 (NS705V),
RV601 (EXCEPT NS705V)   RV602 (EXCEPT NS705V)

VIDEO LEVEL ADJ   RV601 RV401 RV602   COMP OUT
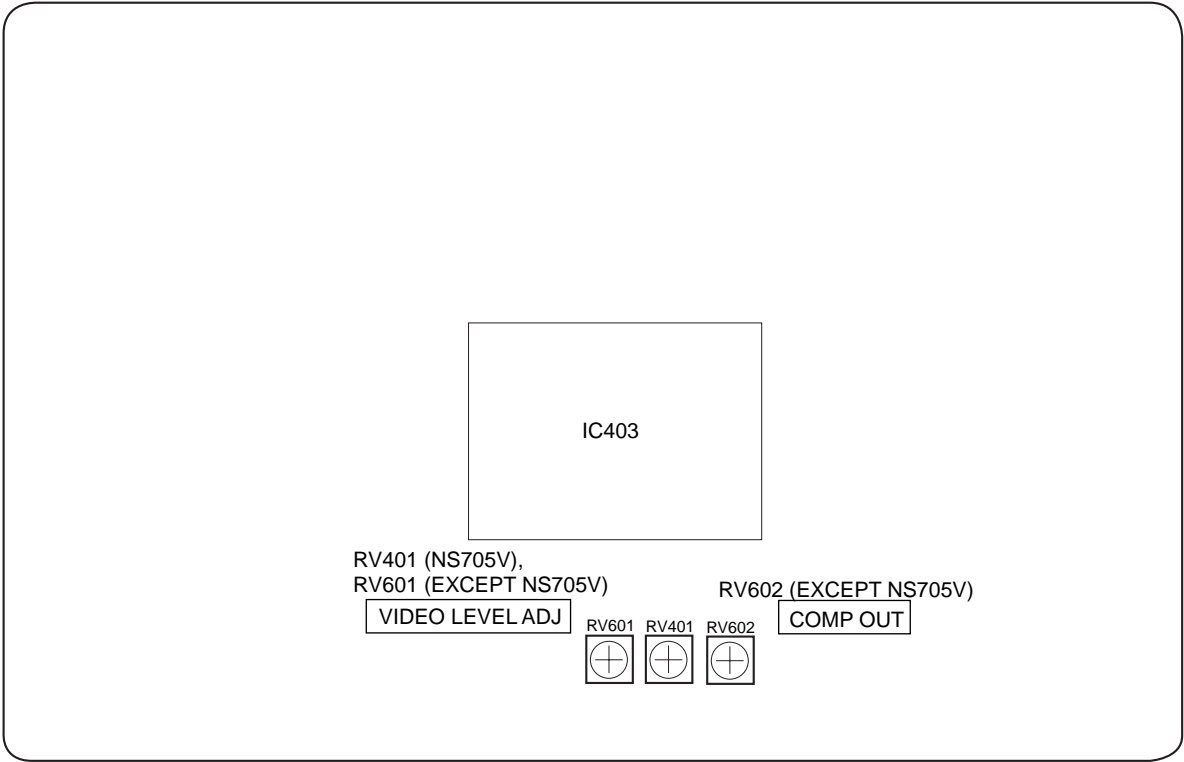
ETXNY393N2F/HS12S1U/HS12S1F BOARD (SIDE A)

13   CN201   1
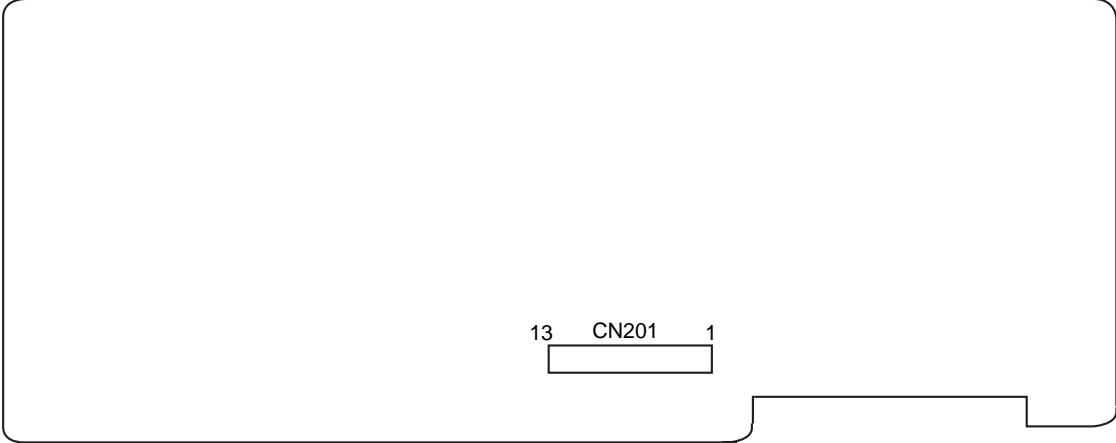
SECTION 8
REPAIR PARTS LIST

8-1. EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)

       ↑   ↑

    Parts Color   Cabinet's Color

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories and packing materials are given in the last of the electrical parts list.

> The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
> Replace only with part number specified.
>
> Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
> Ne les remplacer que par une pièce portant le numéro spécifié.

- Abbreviation

AUS : Australian model	IA : Indonesia model	NZ : New Zealand model	SP : Singapore model
CND : Canadian model	KR : Korean model	ME : Middle East model	TH : Thailand model
EA : Saudi Arabia model	RUS : Russian model	MY : Malaysia model	TW : Taiwan model
HK : Hong Kong model	LA : Latin-American model	PH : Philippines model	VTM: Vietnam model

8-1-1. FRONT PANEL ASSEMBLY (NS705V/NS755V)
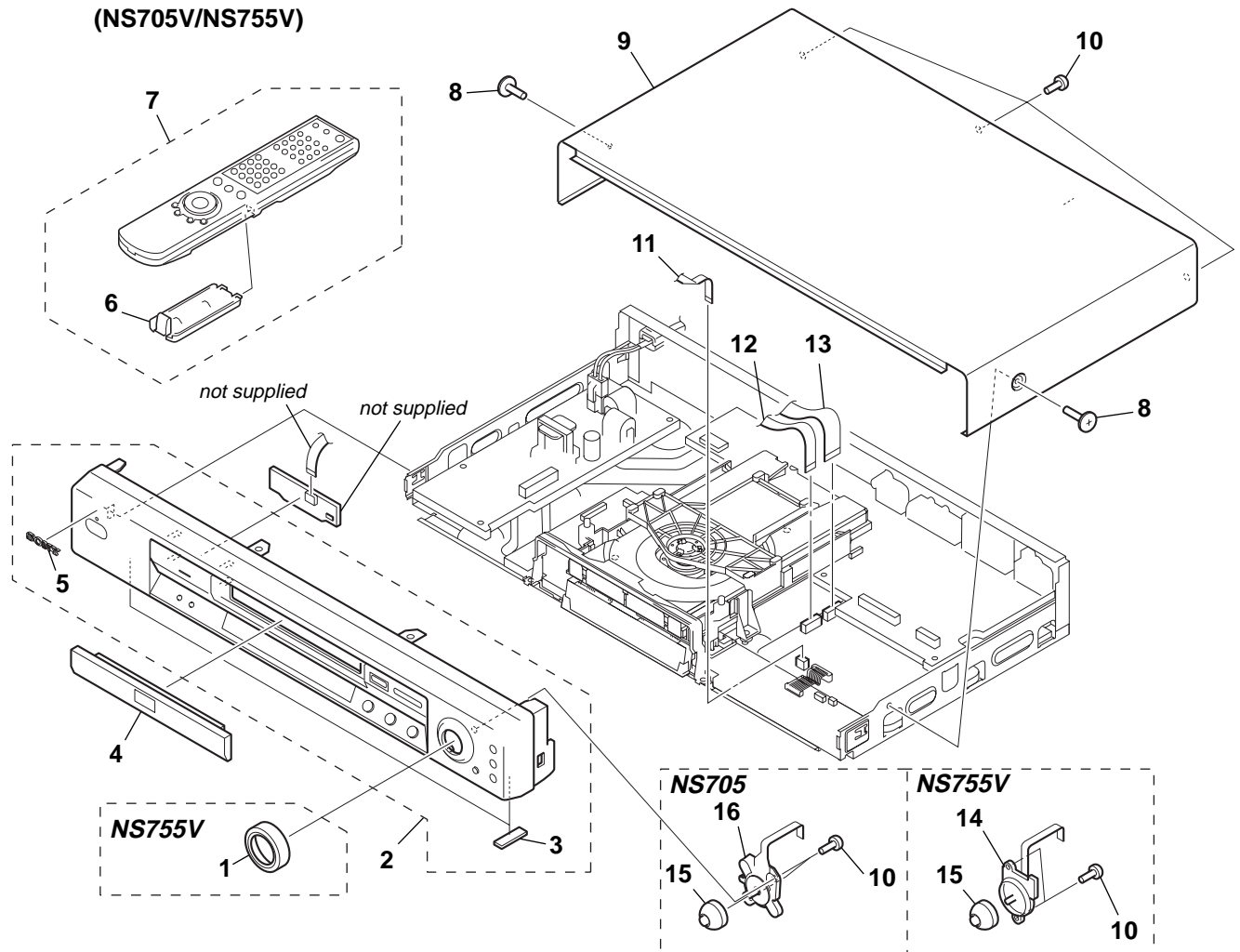
Ref. No.	Part No.	Description	Remark
1	3-075-008-01	RING, SHUTTLE (NS755V)	
2	X-3952-398-3	PANEL ASSY, FRONT (NS755V)	
2	X-3952-399-3	PANEL ASSY, FRONT (NS705V: SILVER)	
2	X-3952-400-3	PANEL ASSY, FRONT (NS705V: BLACK)	
3	3-059-349-11	LEG CUSHION	
4	X-3952-392-1	COVER ASSY, TRAY (SILVER)	
4	X-3952-397-1	COVER ASSY, TRAY (BLACK)	
5	3-066-225-01	SONY BADGE (5-A) (BLACK)	
5	3-066-225-11	SONY BADGE (5-A) (SILVER)	
6	3-073-096-01	LID, BATTERY COVER (for RMT-D146/D147)	
7	1-477-212-11	REMOTE COMMANDER (RMT-D146P) (NS705V)	
7	1-477-213-11	REMOTE COMMANDER (RMT-D147A) (NS755V)	

Ref. No.	Part No.	Description	Remark
8	3-070-883-01	SCREW, TAPPING (BLACK)	
8	3-070-883-11	SCREW, TAPPING (SILVER)	
9	3-075-005-41	CASE (SILVER)	
9	3-075-005-61	CASE (BLACK)	
10	3-710-901-11	SCREW, TAPPING (BLACK)	
10	3-710-901-61	SCREW, TAPPING (SILVER)	
11	1-757-697-11	CABLE, FLEXIBLE FLAT (FMM-035)	
12	1-757-694-11	CABLE, FLEXIBLE FLAT (FMO-002)	
13	1-757-693-11	CABLE, FLEXIBLE FLAT (FMO-001)	
14	1-476-714-11	ENCODER, ROTARY (NS755V)	
15	3-073-491-01	KNOB, CURSOR (NS705V: SILVER)	
15	3-073-491-31	KNOB, CURSOR (NS705V: BLACK)	
16	1-786-131-11	SWITCH, TACTILE (NS705V)	

8-1-2. FRONT PANEL ASSEMBLY
(NS905V/NS915V)

Ref. No.	Part No.	Description	Remark
51	3-075-008-01	RING, SHUTTLE (NS905V: BLACK)	
51	3-075-008-11	RING, SHUTTLE (NS905V: SILVER)	
51	3-075-008-21	RING, SHUTTLE (NS915V)	
52	X-3952-541-2	COVER ASSY, TRAY (NS915V)	
52	X-3952-542-2	COVER ASSY, TRAY (NS905V: BLACK)	
52	X-3952-543-2	COVER ASSY, TRAY (NS905V: SILVER)	
53	X-3952-330-2	PANEL ASSY, FRONT (NS915V: LA)	
53	X-3952-331-2	PANEL ASSY, FRONT (NS905V: BLACK)	
53	X-3952-539-2	PANEL ASSY, FRONT (NS905V: SILVER)	
53	X-3952-536-1	PANEL ASSY, FRONT (NS915V: EXCEPT LA)	
54	4-942-568-41	EMBLEM (NO.5), SONY (NS905V: BLACK)	
54	4-942-568-51	EMBLEM (NO.5), SONY (NS915V)	
54	4-942-568-61	EMBLEM (NO.5), SONY (NS905V: SILVER)	
56	3-073-096-01	LID, BATTERY COVER (for RMT-D146/D147)	
57	1-477-213-11	REMOTE COMMANDER (RMT-D147A) (NS915V: LA)	
57	1-477-213-31	REMOTE COMMANDER (RMT-D147E) (NS915V: EXCEPT LA)	
57	1-477-213-41	REMOTE COMMANDER (RMT-D147P) (NS905V: AEP, UK, RUS)	

Ref. No.	Part No.	Description	Remark
57	1-477-213-51	REMOTE COMMANDER (RMT-D147O) (NS905V: EA, ME, AUS, NZ)	
58	3-070-883-01	SCREW, TAPPING (NS905V: BLACK)	
58	3-070-883-11	SCREW, TAPPING (NS905V: SILVER, NS915V: GOLD)	
59	3-074-164-31	CASE (GOLD)	
59	3-074-164-41	CASE (BLACK)	
59	3-074-164-51	CASE (SILVER)	
60	3-970-608-51	SUMITITE (B3), +BV	
61	1-757-697-11	CABLE, FLEXIBLE FLAT (FMM-035)	
62	1-757-694-11	CABLE, FLEXIBLE FLAT (FMO-002)	
63	1-757-693-11	CABLE, FLEXIBLE FLAT (FMO-001)	
64	X-3950-447-1	FOOT ASSY (NS905V)	
64	X-3950-449-1	FOOT ASSY (NS915V)	
65	1-476-714-11	ENCODER, ROTARY	
66	3-073-491-41	KNOB, CURSOR (NS915V)	
66	3-073-491-51	KNOB, CURSOR (NS905V: SILVER)	

8-1-3. CHASSIS ASSEMBLY (NS705V/NS755V)

104

NS-755V

103

102

102

101

102

102

not supplied

105 *not supplied*

105 **105**

105

105

NS-705V **105**

not supplied

105

105

105

102

102

not supplied

not supplied

NS-705V

102

mechanism deck

106

not supplied

not supplied

not supplied

not supplied

102

not supplied

not supplied

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
⚠101	1-468-650-11	POWER BLOCK (HS12S1U) (NS755V)		⚠103	1-823-597-11	CORD, POWER (NS755V)	
⚠101	1-468-651-11	POWER SUPPLY BLOCK (ETXNY393N2F)		104	3-073-182-01	BUSHING, CODE (NS755V)	
			(NS705V)	104	3-073-182-02	BUSHING, CODE (NS705V)	
102	3-970-608-01	SUMITITE (B3), +BV		105	3-970-608-51	SUMITITE (B3), +BV	
⚠103	1-575-651-21	CORD, POWER (NS705V)		106	1-823-831-11	FAE-9 (NS705V)	

8-1-4. CHASSIS ASSEMBLY
   (NS905V/NS915V)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
⚠151	1-468-650-12	POWER BLOCK (HS12S1U) (NS915V: TW)		⚠153	1-782-752-31	CORD, POWER (NS915V: KR)	
⚠151	1-468-651-11	POWER SUPPLY BLOCK (ETXNY393N2F) (NS905V/NS915V: HK, SP, MY, TH, PH, IA, VTM, KR)		⚠153	1-790-588-11	CORD, POWER (NS905V: AUS, NZ)	
				⚠153	1-824-303-11	POWER-SUPPLY CORD (NS915V: TW)	
				154	3-073-182-02	BUSHING, CODE (NS905V/NS915V)	
⚠151	1-468-652-11	POWER BLOCK(HS12S1F) (NS915V: LA)		155	3-970-608-51	SUMITITE (B3), +BV	
152	3-970-608-01	SUMITITE (B3), +BV					
⚠153	1-575-651-21	CORD, POWER (NS905V: AEP, UK, RUS, EA, ME/NS915V: LA, HK, SP, MY, TH, PH, IA, VTM)		160	1-823-831-11	FAE-9 (NS905V: AEP, UK RUS)	

8-4

8-1-5. MECHANISM DECK ASSEMBLY

not supplied

not supplied

not supplied

not supplied

not supplied

not supplied

not supplied

not supplied

not supplied

not supplied

not supplied

not supplied

202

203

202

202

203

201

203

204

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	A-6060-556-A	LOADING ASSY (T)		203	3-067-344-01	INSULATOR SCREW	
202	3-053-847-11	INSULATOR		⚠204	A-6062-709-A	KHM-270AAA SERVICE ASSY	

8-2. ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Not all of the parts for POWER BLOCK (ETXN393N2F/HS12S1U/HS12S1F) are listed.
- Abbreviation

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA. . : μA. .   uPA. . : μPA. .
  uPB. : μPB. .   uPC. . : μPC. .
  uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

AUS : Australian model	IA : Indonesia model	NZ : New Zealand model	SP : Singapore model
CND : Canadian model	KR : Korean model	ME : Middle East model	TH : Thailand model
EA : Saudi Arabia model	RUS : Russian model	MY : Malaysia model	TW : Taiwan model
HK : Hong Kong model	LA : Latin-American model	PH : Philippines model	VTM: Vietnam model

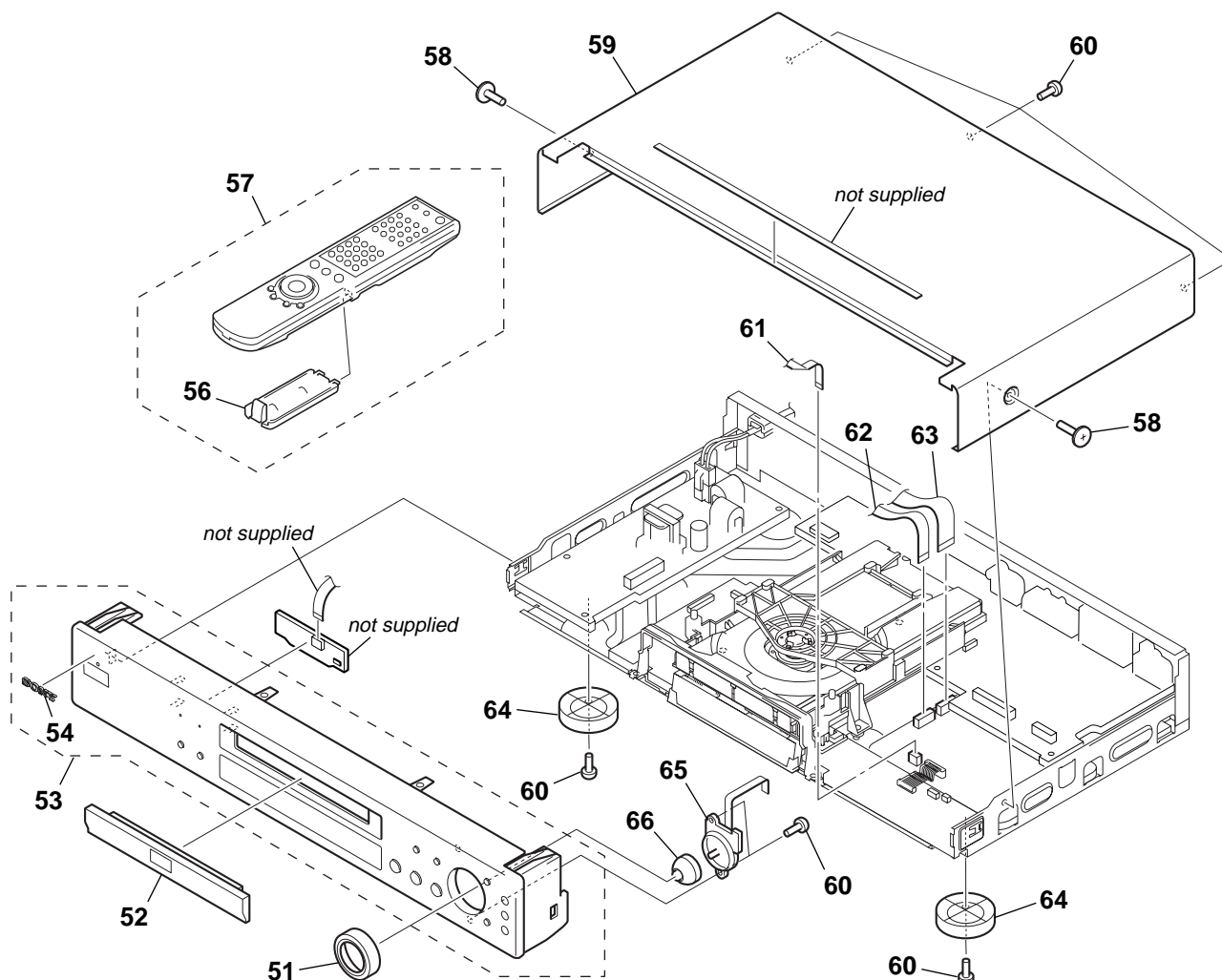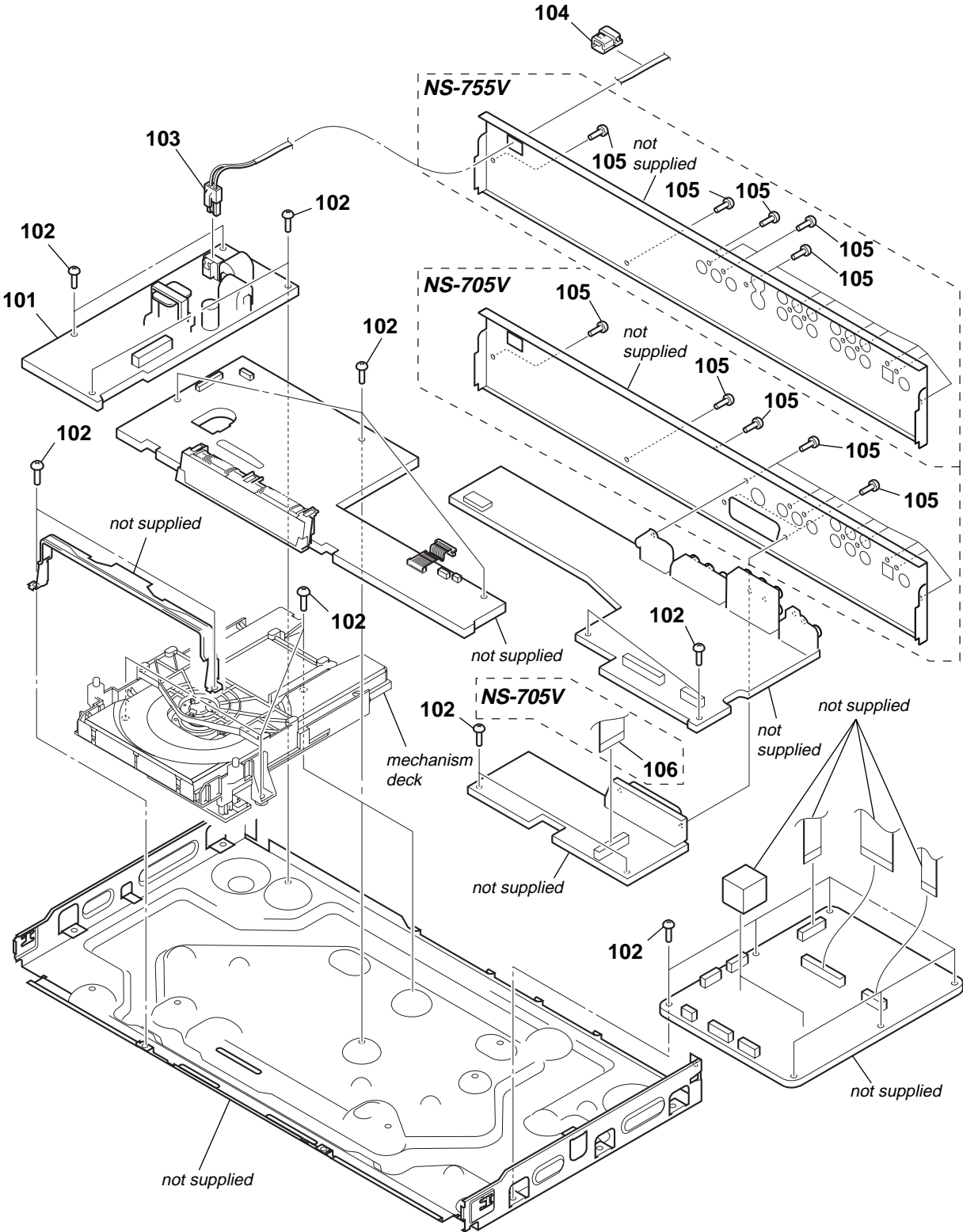| Ref. No. | Part No. | Description | | | Remark | Ref. No. | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AV-64 ST (E) BOARD, COMPLETE (NS705V) | | | | C223 | 1-136-356-11 | MYLAR | 470PF | 5% | 50V (NS905V/NS915V) |
| | | AV-64 UP (U) BOARD, COMPLETE (NS755V) | | | | | | | | | |
| | | AV-64 UNI (E) BOARD, COMPLETE (NS905V: AEP, UK, RUS) | | | | C224 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| | | | | | | C226 | 1-109-857-11 | ELECT | 47uF | 20% | 63V (NS905V/NS915V) |
| | | AV-64 UNI (ME) BOARD, COMPLETE (NS905V: EA, ME, AUS, NZ) | | | | | | | | | |
| | | AV-64 UP (LA) BOARD, COMPLETE (NS915V) | | | | C227 | 1-109-857-11 | ELECT | 47uF | 20% | 63V (NS905V/NS915V) |
| | | **** *** *** *** *** *** *** *** | | | | C230 | 1-109-857-11 | ELECT | 47uF | 20% | 63V (NS905V/NS915V) |
| | | (Ref. No.: 1, 000 Series) | | | | | | | | | |
| | | | | | | C231 | 1-109-857-11 | ELECT | 47uF | 20% | 63V (NS905V/NS915V) |
| | | < CAPACITOR > | | | | | | | | | |
| | | | | | | C234 | 1-109-857-11 | ELECT | 47uF | 20% | 63V (NS905V/NS915V) |
| C101 | 1-126-947-11 | ELECT | 47uF | 20% | 25V | | | | | | |
| C105 | 1-107-725-11 | CERAMIC CHIP | 0.1uF | 10% | 16V | C235 | 1-126-947-11 | ELECT | 47uF | 20% | 16V |
| C106 | 1-126-947-11 | ELECT | 47uF | 20% | 16V | | | | | | |
| C107 | 1-126-947-11 | ELECT | 47uF | 20% | 16V | C236 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C108 | 1-126-947-11 | ELECT | 47uF | 20% | 16V | C237 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| | | | | | | C238 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C109 | 1-163-809-11 | CERAMIC CHIP | 0.047uF | 10% | 25V | C239 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C110 | 1-126-947-11 | ELECT | 47uF | 20% | 16V | C240 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C111 | 1-107-725-11 | CERAMIC CHIP | 0.1uF | 10% | 16V | | | | | | |
| C112 | 1-126-947-11 | ELECT | 47uF | 20% | 16V | C241 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C113 | 1-107-725-11 | CERAMIC CHIP | 0.1uF | 10% | 16V | C242 | 1-126-947-11 | ELECT | 47uF | 20% | 16V (NS705V/NS755V) |
| C201 | 1-126-767-11 | ELECT | 1000uF | 20% | 16V | | | | | | |
| C202 | 1-126-960-11 | ELECT | 1uF | 20% | 50V | C248 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V (NS705V) |
| C208 | 1-136-356-11 | MYLAR | 470PF | 5% | 50V (NS905V/NS915V) | | | | | | |
| | | | | | | C248 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V (EXCEPT NS705V) |
| C209 | 1-136-356-11 | MYLAR | 470PF | 5% | 50V (NS905V/NS915V) | C249 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V (NS705V) |
| C210 | 1-136-356-11 | MYLAR | 470PF | 5% | 50V (NS905V/NS915V) | | | | | | |
| | | | | | | C249 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V (EXCEPT NS705V) |
| C214 | 1-136-356-11 | MYLAR | 470PF | 5% | 50V (NS905V/NS915V) | C250 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V (NS705V) |
| C215 | 1-136-356-11 | MYLAR | 470PF | 5% | 50V (NS905V/NS915V) | C250 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V (EXCEPT NS705V) |
| C216 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V | C251 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V (NS705V) |
| C219 | 1-136-356-11 | MYLAR | 470PF | 5% | 50V (NS905V/NS915V) | | | | | | |
| C220 | 1-136-356-11 | MYLAR | 470PF | 5% | 50V (NS905V/NS915V) | C251 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V (EXCEPT NS705V) |
| C221 | 1-136-356-11 | MYLAR | 470PF | 5% | 50V (NS905V/NS915V) | C252 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V (NS705V) |
| C222 | 1-136-356-11 | MYLAR | 470PF | 5% | 50V (NS905V/NS915V) | C252 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V (EXCEPT NS705V) |

Ref. No.	Part No.	Description			Remark
C253	1-126-947-11	ELECT	47uF	20%	16V
					(NS705V/NS755V)
C254	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V
C255	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
					(EXCEPT NS905V: AEP, UK, RUS)
C256	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
					(EXCEPT NS905V: AEP, UK, RUS)
C257	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
					(EXCEPT NS905V: AEP, UK, RUS)
C258	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
					(EXCEPT NS905V: AEP, UK, RUS)
C259	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
					(EXCEPT NS905V: AEP, UK, RUS)
C260	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C261	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
					(NS705V/NS755V)
C262	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
					(NS705V/NS755V)
C263	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C264	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
					(NS705V/NS755V)
C265	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
					(NS705V/NS755V)
C266	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C267	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
					(NS705V/NS755V)
C268	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
					(NS705V/NS755V)
C269	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
					(NS705V/NS755V)
C270	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C271	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
					(NS705V/NS755V)
C272	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C273	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
					(NS705V/NS755V)
C274	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
					(NS705V/NS755V)
C275	1-126-947-11	ELECT	47uF	20%	16V
					(NS705V/NS755V)
C276	1-126-947-11	ELECT	47uF	20%	16V
					(NS705V/NS755V)
C277	1-126-947-11	ELECT	47uF	20%	16V
					(NS705V/NS755V)
C301	1-126-947-11	ELECT	47uF	20%	25V
C309	1-136-356-11	MYLAR	470PF	5%	50V
					(NS905V/NS915V)
C310	1-136-356-11	MYLAR	470PF	5%	50V
					(NS905V/NS915V)
C311	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C312	1-136-356-11	MYLAR	470PF	5%	50V
					(NS905V/NS915V)
C313	1-136-356-11	MYLAR	470PF	5%	50V
					(NS905V/NS915V)
C314	1-136-850-11	MYLAR	0.1uF	5%	63V
					(NS905V/NS915V)
C315	1-109-857-11	ELECT	47uF	20%	63V
					(NS905V/NS915V)
C316	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C317	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C318	1-109-857-11	ELECT	47uF	20%	63V
					(NS905V/NS915V)
C321	1-109-857-11	ELECT	47uF	20%	63V
					(NS905V/NS915V)
C322	1-126-960-11	ELECT	1uF	20%	50V

Ref. No.	Part No.	Description			Remark
C323	1-126-960-11	ELECT	1uF	20%	50V
					(NS705V/NS905V: AEP, UK, RUS)
C333	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
					(EXCEPT NS905V: AEP, UK, RUS)
C334	1-163-016-00	CERAMIC CHIP	0.0039uF	10%	50V
					(EXCEPT NS905V: AEP, UK, RUS)
C335	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C336	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
					(NS705V/NS755V)
C337	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
					(NS705V/NS755V)
C338	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C339	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
					(NS705V/NS755V)
C340	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
					(NS705V/NS755V)
C343	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C346	1-126-924-11	ELECT	330uF	20%	6.3V
C348	1-126-947-11	ELECT	47uF	20%	25V
C349	1-126-947-11	ELECT	47uF	20%	16V
					(NS705V/NS755V)
C350	1-126-947-11	ELECT	47uF	20%	16V
					(NS705V/NS755V)
C353	1-126-947-11	ELECT	47uF	20%	16V
					(NS705V/NS755V)
C354	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C355	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C356	1-126-947-11	ELECT	47uF	20%	16V
C357	1-126-947-11	ELECT	47uF	20%	16V
C359	1-126-960-11	ELECT	1uF	20%	50V
C361	1-126-947-11	ELECT	47uF	20%	25V

< CONNECTOR >

CN302	1-506-486-11	PIN, CONNECTOR 7P

< DIODE >

D101	8-719-071-15	DIODE HZM6.8ZWA1TL
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)
D102	8-719-071-15	DIODE HZM6.8ZWA1TL
D106	8-719-071-15	DIODE HZM6.8ZWA1TL
D107	8-719-071-15	DIODE HZM6.8ZWA1TL
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)
D108	8-719-053-18	DIODE 1SR154-400TE-25
D109	8-719-053-18	DIODE 1SR154-400TE-25
D301	8-719-988-61	DIODE 1SS355TE-17
D303	8-719-914-43	DIODE DAN202K-T-146

< FERRITE BEAD >

FB301	1-469-324-21	FERRITE	0uH (NS705V)
FB301	1-216-295-91	SHORT CHIP	0 (EXCEPT NS705V)

< IC >

IC102	8-759-662-86	IC NJM79M05DL1A (TE2)
IC103	8-759-826-46	IC LA73051-TLM
		(NS705V/NS905V: AEP, UK, RUS)
IC103	6-701-820-01	IC LA73053-TLM-E
		(NS755V/NS905V: EA, ME, AUS, NZ/NS915V)
IC201	8-759-684-22	IC BA15532F-E2 (NS905V/NS915V)
IC201	8-759-909-71	IC BA4558F-E2 (NS705V/NS755V)
IC202	8-759-684-22	IC BA15532F-E2 (NS905V/NS915V)
IC202	8-759-909-71	IC BA4558F-E2 (NS705V/NS755V)

Ref. No.	Part No.	Description			Remark
IC203	8-759-684-22	IC BA15532F-E2 (NS905V/NS915V)			
IC203	8-759-909-71	IC BA4558F-E2 (NS705V/NS755V)			
IC301	8-749-017-80	IC GP1FA551TZ (DIGITAL OUT OPTICAL)			
IC302	8-759-052-52	IC NJM78M05DL1A-TE1			
IC303	8-759-909-71	IC BA4558F-E2 (NS705V/NS755V)			
IC303	8-759-684-22	IC BA15532F-E2 (NS905V/NS915V)			
		< JACK >			
J101	1-794-198-11	CONNECTOR, S TERMINAL (S VIDEO OUT)			
		(NS705V/NS905V: AEP, UK, RUS)			
J101	1-694-484-21	TERMINAL, S (2P.V) (S VIDEO OUT)			
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)			
J102	1-815-358-11	JACK, PIN (3P) (LINE OUT)			
		(NS705V/NS905V: AEP, UK, RUS)			
J102	1-815-362-21	JACK, PIN (6P) (LINE OUT)			
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)			
J103	1-793-445-11	JACK, PIN 3P (COMPONENT VIDEO OUT)			
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)			
J201	1-815-029-21	JACK, PIN 6P (5.1CH OUTPUT)			
J301	1-793-446-21	JACK, PIN 1P (DIGITAL OUT COAXIAL)			
		< COIL >			
L101	1-412-060-11	INDUCTOR 22uH			
L301	1-412-064-11	INDUCTOR 100uH			
		< TRANSISTOR >			
Q104	8-729-421-19	TRANSISTOR UN2213-TX			
Q105	8-729-424-08	TRANSISTOR UN2111-TX			
Q201	8-729-421-19	TRANSISTOR UN2213-TX			
Q202	8-729-027-53	TRANSISTOR DTC124TKA-T146			
Q203	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q204	6-550-137-01	TRANSISTOR 2SD1938 (F)-ST (TX).SO			
Q205	6-550-137-01	TRANSISTOR 2SD1938 (F)-ST (TX).SO			
Q206	6-550-137-01	TRANSISTOR 2SD1938 (F)-ST (TX).SO			
Q207	6-550-137-01	TRANSISTOR 2SD1938 (F)-ST (TX).SO			
Q208	6-550-137-01	TRANSISTOR 2SD1938 (F)-ST (TX).SO			
Q209	6-550-137-01	TRANSISTOR 2SD1938 (F)-ST (TX).SO			
Q301	8-729-230-49	TRANSISTOR 2SC2712-YG-TE85L			
Q302	8-729-421-19	TRANSISTOR UN2213-TX			
Q303	8-729-027-53	TRANSISTOR DTC124TKA-T146			
Q304	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
Q305	6-550-137-01	TRANSISTOR 2SD1938 (F)-ST (TX).SO			
Q306	6-550-137-01	TRANSISTOR 2SD1938 (F)-ST (TX).SO			
Q307	8-729-421-19	TRANSISTOR UN2213-TX			
		(NS705V/NS905V: AEP, UK, RUS)			
Q308	8-729-027-53	TRANSISTOR DTC124TKA-T146			
		(NS705V/NS905V: AEP, UK, RUS)			
Q309	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
		(NS705V/NS905V: AEP, UK, RUS)			
Q310	8-729-049-31	TRANSISTOR 2SB710A-RTX			
Q311	8-729-230-49	TRANSISTOR 2SC2712-YG-TE85L			
Q312	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX			
		< RESISTOR >			
R101	1-216-295-91	SHORT CHIP 0			
R103	1-216-061-91	RES-CHIP 3.3K	5%	1/10W	
R108	1-216-073-91	RES-CHIP 10K	5%	1/10W	
R109	1-216-021-00	METAL CHIP 68	5%	1/10W	
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)			

Ref. No.	Part No.	Description			Remark
R110	1-216-021-00	METAL CHIP	68	5%	1/10W
R111	1-216-021-00	METAL CHIP	68	5%	1/10W
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)			
R112	1-216-021-00	METAL CHIP	68	5%	1/10W
R113	1-216-021-00	METAL CHIP	68	5%	1/10W
R114	1-216-021-00	METAL CHIP	68	5%	1/10W
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)			
R115	1-216-021-00	METAL CHIP	68	5%	1/10W
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)			
R116	1-216-021-00	METAL CHIP	68	5%	1/10W
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)			
R117	1-216-021-00	METAL CHIP	68	5%	1/10W
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)			
R118	1-216-021-00	METAL CHIP	68	5%	1/10W
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)			
R119	1-216-021-00	METAL CHIP	68	5%	1/10W
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)			
R120	1-216-021-00	METAL CHIP	68	5%	1/10W
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)			
R124	1-216-049-11	RES-CHIP	1K	5%	1/10W
					(NS755V/NS915V)
R136	1-216-049-11	RES-CHIP	1K	5%	1/10W
					(NS755V/NS915V)
R137	1-216-049-11	RES-CHIP	1K	5%	1/10W
					(NS755V/NS915V)
⚠ R140	1-215-860-11	METAL OXIDE	33	5%	1W
R141	1-216-295-91	SHORT CHIP	0		
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)			
R201	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R202	1-216-073-91	RES-CHIP	10K	5%	1/10W
R203	1-216-073-91	RES-CHIP	10K	5%	1/10W
R204	1-216-089-91	RES-CHIP	47K	5%	1/10W
R205	1-216-073-91	RES-CHIP	10K	5%	1/10W
R206	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R207	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R208	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R209	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R210	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R211	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R212	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R213	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R214	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R215	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R216	1-216-049-11	RES-CHIP	1K	5%	1/10W
R217	1-216-049-11	RES-CHIP	1K	5%	1/10W
R218	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R219	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R220	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R221	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R222	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R223	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R224	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R225	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R226	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R227	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R228	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
		(NS705V/NS905V: AEP, UK, RUS)			
R230	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R231	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W

Ref. No.	Part No.	Description			Remark
R232	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R233	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R234	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R235	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R236	1-216-045-00	METAL CHIP	680	5%	1/10W
R237	1-216-045-00	METAL CHIP	680	5%	1/10W
R238	1-216-045-00	METAL CHIP	680	5%	1/10W
R239	1-216-045-00	METAL CHIP	680	5%	1/10W
R240	1-216-045-00	METAL CHIP	680	5%	1/10W
R241	1-216-045-00	METAL CHIP	680	5%	1/10W
R242	1-216-045-00	METAL CHIP	680	5%	1/10W
R243	1-216-045-00	METAL CHIP	680	5%	1/10W
R244	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R245	1-216-045-00	METAL CHIP	680	5%	1/10W
R246	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R247	1-216-045-00	METAL CHIP	680	5%	1/10W
R248	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R249	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R250	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R251	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R252	1-216-041-00	METAL CHIP	470	5%	1/10W
R253	1-216-041-00	METAL CHIP	470	5%	1/10W
R254	1-216-041-00	METAL CHIP	470	5%	1/10W
R255	1-216-041-00	METAL CHIP	470	5%	1/10W
R256	1-216-041-00	METAL CHIP	470	5%	1/10W
R257	1-216-041-00	METAL CHIP	470	5%	1/10W
R258	1-216-089-91	RES-CHIP	47K	5%	1/10W
R259	1-216-089-91	RES-CHIP	47K	5%	1/10W
R260	1-216-089-91	RES-CHIP	47K	5%	1/10W
R261	1-216-089-91	RES-CHIP	47K	5%	1/10W
R262	1-216-089-91	RES-CHIP	47K	5%	1/10W
R263	1-216-089-91	RES-CHIP	47K	5%	1/10W
R264	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R265	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R266	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R267	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)			
R268	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R269	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R270	1-216-097-11	RES-CHIP	100K	5%	1/10W
R271	1-414-233-22	FERRITE	0uH (NS705V)		
R271	1-216-295-91	SHORT CHIP	0 (NS755V/NS915V)		
R271	1-216-025-11	RES-CHIP	100	5%	1/10W
		(NS905V)			
R272	1-414-233-22	FERRITE	0uH (NS705V)		
R272	1-216-295-91	SHORT CHIP	0 (NS755V/NS915V)		
R272	1-216-025-11	RES-CHIP	100	5%	1/10W
		(NS905V)			
R273	1-414-233-22	FERRITE	0uH (NS705V)		
R273	1-216-295-91	SHORT CHIP	0 (NS755V/NS915V)		
R273	1-216-025-11	RES-CHIP	100	5%	1/10W
		(NS905V)			
R274	1-414-233-22	FERRITE	0uH (NS705V)		
R274	1-216-295-91	SHORT CHIP	0 (NS755V/NS915V)		
R274	1-216-025-11	RES-CHIP	100	5%	1/10W
		(NS905V)			
R275	1-414-233-22	FERRITE	0uH (NS705V)		
R275	1-216-295-91	SHORT CHIP	0 (NS755V/NS915V)		
R275	1-216-025-11	RES-CHIP	100	5%	1/10W
		(NS905V)			
R276	1-414-233-22	FERRITE	0uH (NS705V/NS905V)		
R276	1-216-295-91	SHORT CHIP	0 (NS755V/NS915V)		
R301	1-216-033-00	METAL CHIP	220	5%	1/10W
R302	1-216-021-00	METAL CHIP	68	5%	1/10W
R303	1-216-049-11	RES-CHIP	1K	5%	1/10W
R304	1-216-049-11	RES-CHIP	1K	5%	1/10W
R305	1-216-073-91	RES-CHIP	10K	5%	1/10W
R306	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R307	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R308	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R309	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R310	1-216-049-11	RES-CHIP	1K	5%	1/10W
R311	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R312	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R313	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R314	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R315	1-216-295-91	SHORT CHIP	0		
R316	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R317	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R318	1-216-045-00	METAL CHIP	680	5%	1/10W
R320	1-216-045-00	METAL CHIP	680	5%	1/10W
R321	1-216-045-00	METAL CHIP	680	5%	1/10W
R322	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R323	1-216-045-00	METAL CHIP	680	5%	1/10W
R324	1-216-660-11	METAL CHIP	2.4K	0.5%	1/10W
R325	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R326	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
		(NS705V/NS905V: AEP, UK, RUS)			
R327	1-216-041-00	METAL CHIP	470	5%	1/10W
R328	1-216-041-00	METAL CHIP	470	5%	1/10W
R329	1-216-073-91	RES-CHIP	10K	5%	1/10W
R330	1-216-089-91	RES-CHIP	47K	5%	1/10W
R331	1-216-073-91	RES-CHIP	10K	5%	1/10W
R332	1-216-089-91	RES-CHIP	47K	5%	1/10W
R333	1-216-089-91	RES-CHIP	47K	5%	1/10W
R334	1-216-073-91	RES-CHIP	10K	5%	1/10W
R335	1-216-073-91	RES-CHIP	10K	5%	1/10W
		(NS705V/NS905V: AEP, UK, RUS)			
R336	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)			
R337	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R338	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
		(NS705V/NS905V: AEP, UK, RUS)			
R339	1-216-073-91	RES-CHIP	10K	5%	1/10W
		(NS705V/NS905V: AEP, UK, RUS)			
R341	1-216-097-11	RES-CHIP	100K	5%	1/10W
R342	1-216-073-91	RES-CHIP	10K	5%	1/10W
		(NS705V/NS905V: AEP, UK, RUS)			
R343	1-216-097-11	RES-CHIP	100K	5%	1/10W
		(NS705V/NS905V: AEP, UK, RUS)			
R347	1-216-041-00	METAL CHIP	470	5%	1/10W
R348	1-216-041-00	METAL CHIP	470	5%	1/10W
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)			
R349	1-216-041-00	METAL CHIP	470	5%	1/10W
R350	1-216-041-00	METAL CHIP	470	5%	1/10W
		(EXCEPT NS705V/NS905V: AEP, UK, RUS)			
R351	1-216-295-91	SHORT CHIP	0		
R352	1-216-295-91	SHORT CHIP	0		
R363	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R364	1-216-073-91	RES-CHIP	10K	5%	1/10W
R365	1-216-097-11	RES-CHIP	100K	5%	1/10W
R366	1-216-041-00	METAL CHIP	470	5%	1/10W
R367	1-216-073-91	RES-CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R368	1-216-097-11	RES-CHIP	100K	5%	1/10W
R370	1-469-324-21	FERRITE	0uH (NS705V)		
R370	1-216-295-91	SHORT CHIP	0 (EXCEPT NS705V)		

< SWITCH >

S101	1-692-989-11	SWITCH, SLIDE (SCAN SELECT)		
			(NS755V/NS915V)	

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ER-19 BOARD, COMPLETE (NS705V)
ER-19 BOARD, COMPLETE
　　　　　　　　　　(NS905V: AEP, UK, RUS)
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　　　　　　　　(Ref. No.: 1, 000 Series)

< CAPACITOR >

C901	1-126-947-11	ELECT	47uF	20%	16V
		(NS705V/NS905V: AEP, UK, RUS)			
C902	1-126-947-11	ELECT	47uF	20%	16V
		(NS705V/NS905V: AEP, UK, RUS)			
C903	1-126-947-11	ELECT	47uF	20%	16V
		(NS705V/NS905V: AEP, UK, RUS)			
C905	1-126-947-11	ELECT	47uF	20%	16V
		(NS705V/NS905V: AEP, UK, RUS)			
C907	1-126-947-11	ELECT	47uF	20%	16V
		(NS705V/NS905V: AEP, UK, RUS)			
C913	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
		(NS705V/NS905V: AEP, UK, RUS)			
C914	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
		(NS705V/NS905V: AEP, UK, RUS)			
C927	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
		(NS905V: AEP, UK, RUS)			
C938	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
		(NS905V: AEP, UK, RUS)			
C940	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
		(NS905V: AEP, UK, RUS)			
C943	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
		(NS705V/NS905V: AEP, UK, RUS)			
C945	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
		(NS705V/NS905V: AEP, UK, RUS)			
C950	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
		(NS905V: AEP, UK, RUS)			
C951	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
		(NS905V: AEP, UK, RUS)			
C962	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
		(NS705V/NS905V: AEP, UK, RUS)			
C963	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
		(NS705V/NS905V: AEP, UK, RUS)			

< CONNECTOR >

CN901	1-815-149-11	CONNECTOR, FPC/FFC (1MM PIC) 21P	
		(NS705V/NS905V: AEP, UK, RUS)	

< JACK >

CNJ901	1-816-044-11	CONNECTOR, SQUARE TYPE 21P (LINE 2)	
		(NS905V: AEP, UK, RUS)	
CNJ902	1-816-044-11	CONNECTOR, SQUARE TYPE 21P (LINE 1)	
		(NS705V/NS905V: AEP, UK, RUS)	

< DIODE >

D901	8-719-988-61	DIODE 1SS355TE-17	
		(NS705V/NS905V: AEP, UK, RUS)	

Ref. No.	Part No.	Description	Remark
D902	8-719-988-61	DIODE 1SS355TE-17	
			(NS905V: AEP, UK, RUS)
D903	8-719-988-61	DIODE 1SS355TE-17	
			(NS905V: AEP, UK, RUS)
D904	8-719-988-61	DIODE 1SS355TE-17	
			(NS905V: AEP, UK, RUS)
D905	8-719-988-61	DIODE 1SS355TE-17	
			(NS905V: AEP, UK, RUS)
D906	8-719-053-18	DIODE 1SR154-400TE-25	
			(NS705V/NS905V: AEP, UK, RUS)
D907	8-719-914-44	DIODE DAP202K-T-146	
			(NS705V/NS905V: AEP, UK, RUS)
D917	8-719-071-15	DIODE HZM6.8ZWA1TL	
			(NS705V/NS905V: AEP, UK, RUS)
D918	8-719-071-15	DIODE HZM6.8ZWA1TL	
			(NS705V/NS905V: AEP, UK, RUS)
D919	8-719-071-15	DIODE HZM6.8ZWA1TL	
			(NS705V/NS905V: AEP, UK, RUS)
D920	8-719-071-15	DIODE HZM6.8ZWA1TL	
			(NS705V/NS905V: AEP, UK, RUS)
D922	8-719-071-15	DIODE HZM6.8ZWA1TL	
			(NS705V/NS905V: AEP, UK, RUS)
D924	8-719-071-15	DIODE HZM6.8ZWA1TL	
			(NS705V/NS905V: AEP, UK, RUS)
D926	8-719-069-56	DIODE UDZSTE-176.2B	
			(NS905V: AEP, UK, RUS)
D927	8-719-083-63	DIODE UDZSTE-1713B	
			(NS905V: AEP, UK, RUS)
D929	8-719-069-56	DIODE UDZSTE-176.2B	
			(NS705V/NS905V: AEP, UK, RUS)
D930	8-719-083-63	DIODE UDZSTE-1713B	
			(NS705V/NS905V: AEP, UK, RUS)

< FERRITE BEAD >

FB901	1-469-796-21	FERRITE	0uH	
			(NS905V: AEP, UK, RUS)	
FB903	1-469-796-21	FERRITE	0uH	
			(NS905V: AEP, UK, RUS)	
FB904	1-469-796-21	FERRITE	0uH	
			(NS905V: AEP, UK, RUS)	
FB905	1-469-796-21	FERRITE	0uH	
			(NS905V: AEP, UK, RUS)	
FB907	1-469-796-21	FERRITE	0uH	
			(NS705V/NS905V: AEP, UK, RUS)	
FB908	1-469-796-21	FERRITE	0uH	
			(NS705V/NS905V: AEP, UK, RUS)	
FB909	1-469-796-21	FERRITE	0uH	
			(NS705V/NS905V: AEP, UK, RUS)	
FB910	1-469-796-21	FERRITE	0uH	
			(NS705V/NS905V: AEP, UK, RUS)	
FB911	1-414-233-22	FERRITE	0uH (NS905V: AEP, UK, RUS)	
FB913	1-414-233-22	FERRITE	0uH	
			(NS905V: AEP, UK, RUS)	
FB916	1-414-233-22	FERRITE	0uH	
			(NS705V/NS905V: AEP, UK, RUS)	
FB918	1-414-233-22	FERRITE	0uH	
			(NS705V/NS905V: AEP, UK, RUS)	
FB919	1-216-295-91	SHORT CHIP	0 (NS905V: AEP, UK, RUS)	
FB919	1-469-324-21	FERRITE	0uH (NS705V)	

< IC >

IC901	8-759-826-47	IC LA73052-TLM	
		(NS705V/NS905V: AEP, UK, RUS)	

Ref. No.	Part No.	Description				Remark
		< COIL >				
L905	1-412-060-11	INDUCTOR	22uH			
		(NS705V/NS905V: AEP, UK, RUS)				
		< TRANSISTOR >				
Q901	8-729-421-19	TRANSISTOR	UN2213-TX			
		(NS705V/NS905V: AEP, UK, RUS)				
Q902	8-729-422-27	TRANSISTOR	2SD601A-QRS-TX			
		(NS705V/NS905V: AEP, UK, RUS)				
Q903	8-729-424-08	TRANSISTOR	UN2111-TX			
		(NS705V/NS905V: AEP, UK, RUS)				
Q906	8-729-421-19	TRANSISTOR	UN2213-TX			
		(NS705V/NS905V: AEP, UK, RUS)				
Q907	8-729-424-08	TRANSISTOR	UN2111-TX			
		(NS705V/NS905V: AEP, UK, RUS)				
Q908	8-729-421-22	TRANSISTOR	UN2211-TX			
		(NS705V/NS905V: AEP, UK, RUS)				
Q909	8-729-421-19	TRANSISTOR	UN2213-TX			
		(NS705V/NS905V: AEP, UK, RUS)				
Q910	8-729-424-08	TRANSISTOR	UN2111-TX			
		(NS705V/NS905V: AEP, UK, RUS)				
Q911	8-729-216-22	TRANSISTOR	2SA1162-YG-TE85L			
		(NS705V/NS905V: AEP, UK, RUS)				
Q912	8-729-422-27	TRANSISTOR	2SD601A-QRS-TX			
		(NS905V: AEP, UK, RUS)				
Q913	8-729-422-27	TRANSISTOR	2SD601A-QRS-TX			
		(NS905V: AEP, UK, RUS)				
Q914	8-729-422-27	TRANSISTOR	2SD601A-QRS-TX			
		(NS905V: AEP, UK, RUS)				
Q915	8-729-422-27	TRANSISTOR	2SD601A-QRS-TX			
		(NS905V: AEP, UK, RUS)				
		< RESISTOR >				
R904	1-216-295-91	SHORT CHIP	0 (NS705V)			
R905	1-216-089-91	RES-CHIP	47K	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R906	1-216-089-91	RES-CHIP	47K	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R907	1-216-089-91	RES-CHIP	47K	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R908	1-216-105-91	RES-CHIP	220K	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R909	1-216-037-00	METAL CHIP	330	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R910	1-216-037-00	METAL CHIP	330	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R911	1-216-037-00	METAL CHIP	330	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R912	1-216-037-00	METAL CHIP	330	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R914	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R915	1-216-045-00	METAL CHIP	680	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R916	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R917	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R918	1-216-021-00	METAL CHIP	68	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R919	1-216-295-91	SHORT CHIP	0 (NS905V: AEP, UK, RUS)			
R921	1-216-295-91	SHORT CHIP	0 (NS705V)			
R922	1-216-295-91	SHORT CHIP	0 (NS705V)			

Ref. No.	Part No.	Description				Remark
R923	1-216-041-00	METAL CHIP	470	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R924	1-216-041-00	METAL CHIP	470	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R925	1-216-295-91	SHORT CHIP	0 (NS705V)			
R926	1-216-295-91	SHORT CHIP	0 (NS705V)			
R927	1-216-021-00	METAL CHIP	68	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R928	1-216-021-00	METAL CHIP	68	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R929	1-216-021-00	METAL CHIP	68	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R930	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	
		(NS905V: AEP, UK, RUS)				
R931	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	
		(NS905V: AEP, UK, RUS)				
R932	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	
		(NS905V: AEP, UK, RUS)				
R933	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	
		(NS905V: AEP, UK, RUS)				
R934	1-216-295-91	SHORT CHIP	0 (NS705V)			
R937	1-216-295-91	SHORT CHIP	0 (NS705V)			
R938	1-216-021-00	METAL CHIP	68	5%	1/10W	
		(NS905V: AEP, UK, RUS)				
R939	1-216-021-00	METAL CHIP	68	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R945	1-216-295-91	SHORT CHIP	0 (NS705V)			
R946	1-216-049-11	RES-CHIP	1K	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R950	1-216-081-00	METAL CHIP	22K	5%	1/10W	
		(NS705V/NS905V: AEP, UK, RUS)				
R957	1-216-295-91	SHORT CHIP	0 (NS905V: AEP, UK, RUS)			
		< RELAY >				
RY901	1-515-622-11	RELAY (NS905V: AEP, UK, RUS)				
RY902	1-515-622-11	RELAY (NS905V: AEP, UK, RUS)				
RY903	1-515-622-11	RELAY (NS905V: AEP, UK, RUS)				
RY904	1-515-622-11	RELAY (NS905V: AEP, UK, RUS)				

Ref. No.	Part No.	Description				Remark
		IF-94 BOARD, COMPLETE (NS705V)				
		IF-94 BOARD, COMPLETE (NS755V/NS915V)				
		IF-94 BOARD, COMPLETE (NS905V)				
		*********************				
		(Ref. No.: 1, 000 Series)				
	3-067-239-01	HOLDER, FL				
		< BUZZER >				
BZ401	1-529-986-11	BUZZER, VOLTAGE				
		< CAPACITOR >				
C401	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C402	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
		(EXCEPT NS705V)				
C403	1-128-551-11	ELECT	22uF	20%	25V	
C404	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
		(EXCEPT NS705V)				
C407	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C409	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C411	1-104-665-11	ELECT	100uF	20%	25V	
C412	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C414	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C416	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	

8-11

Ref. No.	Part No.	Description			Remark
C417	1-137-150-11	FILM	0.01uF	5%	100V
C419	1-104-666-11	ELECT	220uF	20%	25V
C420	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C421	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C422	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C425	1-119-943-91	ELECT	47uF	20%	50V
C426	1-128-551-11	ELECT	22uF	20%	25V
C427	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C429	1-104-665-11	ELECT	100uF	20%	25V
C431	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C432	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C437	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C440	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C441	1-126-947-11	ELECT	47uF	20%	25V

< CONNECTOR >

Ref. No.	Part No.	Description
CN403	1-815-458-21	CONNECTOR, BOARD TO BOARD 15P
* CN405	1-785-530-11	PIN, CONNECTOR (PC BOARD) 10P
CN406	1-785-694-11	CONNECTOR, FFC/FPC 7P (EXCEPT NS705V)
CN406	1-815-381-11	CONNECTOR, FPC/FFC 5P (NS705V)
CN407	1-785-694-11	CONNECTOR, FFC/FPC 7P (NS755V/NS915V)
CN407	1-815-381-11	CONNECTOR, FPC/FFC 5P (NS705V/NS905V)

< DIODE >

Ref. No.	Part No.	Description	
D401	8-719-071-15	DIODE	HZM6.8ZWA1TL (EXCEPT NS705V)
D402	8-719-071-15	DIODE	HZM6.8ZWA1TL (EXCEPT NS705V)
D403	8-719-041-97	DIODE	MA113- (TX)
D404	8-719-041-97	DIODE	MA113- (TX)
D405	8-719-041-97	DIODE	MA113- (TX)
D406	8-719-041-97	DIODE	MA113- (TX)
D412	8-719-017-62	DIODE	MA8068-L-TX

< IC >

Ref. No.	Part No.	Description	
IC403	6-701-875-01	IC	LMS8117ADTX-1.8/NOPB
IC404	6-802-218-01	IC	86CK74AFG-3V35 (M
IC405	8-759-684-35	IC	S-80830ANUP-EDT-T2
IC406	8-749-019-11	IC	GP1UD28SYK

< COIL >

Ref. No.	Part No.	Description	
L401	1-408-978-21	INDUCTOR	47uH

< FLUORESCENT INDICATOR >

Ref. No.	Part No.	Description
ND401	1-518-806-11	TUBE, FLUORESCENT INDICATOR

< IC LINK >

Ref. No.	Part No.	Description
⚠ PS401	1-576-509-21	RINK, IC (1A)
⚠ PS402	1-576-509-21	RINK, IC (1A)

< TRANSISTOR >

Ref. No.	Part No.	Description	
Q401	8-729-056-46	TRANSISTOR	2SC5053T100Q
Q402	8-729-056-46	TRANSISTOR	2SC5053T100Q
Q404	8-729-048-28	TRANSISTOR	2SD1766-T100-QR
Q405	8-729-424-08	TRANSISTOR	UN2111-TX

< RESISTOR >

Ref. No.	Part No.	Description			Remark
R401	1-216-065-91	RES-CHIP	4.7K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R408	1-216-073-91	RES-CHIP	10K	5%	1/10W
R409	1-216-073-91	RES-CHIP	10K	5%	1/10W
R411	1-216-025-11	RES-CHIP	100	5%	1/10W
					(EXCEPT NS705V)
R412	1-216-025-11	RES-CHIP	100	5%	1/10W
					(EXCEPT NS705V)
R413	1-216-073-91	RES-CHIP	10K	5%	1/10W
					(EXCEPT NS705V)
R414	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R415	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R416	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R417	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R418	1-216-073-91	RES-CHIP	10K	5%	1/10W
R419	1-216-073-91	RES-CHIP	10K	5%	1/10W
					(EXCEPT NS705V)
R420	1-216-027-00	METAL CHIP	120	5%	1/10W
					(EXCEPT NS705V)
R421	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R422	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R423	1-216-081-00	METAL CHIP	22K	5%	1/10W
R424	1-216-013-00	METAL CHIP	33	5%	1/10W
R425	1-216-025-11	RES-CHIP	100	5%	1/10W
R426	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R427	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R428	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R430	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R431	1-216-063-91	RES-CHIP	3.9K	5%	1/10W
R433	1-216-073-91	RES-CHIP	10K	5%	1/10W
R434	1-216-073-91	RES-CHIP	10K	5%	1/10W
R435	1-216-073-91	RES-CHIP	10K	5%	1/10W
R437	1-216-027-00	METAL CHIP	120	5%	1/10W
R444	1-216-025-11	RES-CHIP	100	5%	1/10W
R446	1-216-097-11	RES-CHIP	100K	5%	1/10W
R448	1-216-073-91	RES-CHIP	10K	5%	1/10W
R449	1-216-073-91	RES-CHIP	10K	5%	1/10W
R450	1-216-073-91	RES-CHIP	10K	5%	1/10W
R455	1-216-073-91	RES-CHIP	10K	5%	1/10W
R470	1-216-073-91	RES-CHIP	10K	5%	1/10W
					(EXCEPT NS905V)
R471	1-216-073-91	RES-CHIP	10K	5%	1/10W
					(NS905V)
R472	1-216-073-91	RES-CHIP	10K	5%	1/10W
					(NS705V/NS905V)
R473	1-216-073-91	RES-CHIP	10K	5%	1/10W
					(NS755V/NS915V)
R474	1-216-025-11	RES-CHIP	100	5%	1/10W
R481	1-216-025-11	RES-CHIP	100	5%	1/10W
R482	1-216-025-11	RES-CHIP	100	5%	1/10W
R483	1-216-025-11	RES-CHIP	100	5%	1/10W
R484	1-216-025-11	RES-CHIP	100	5%	1/10W
R485	1-216-025-11	RES-CHIP	100	5%	1/10W
R488	1-216-081-00	METAL CHIP	22K	5%	1/10W
R489	1-216-097-11	RES-CHIP	100K	5%	1/10W
R490	1-216-083-00	METAL CHIP	27K	5%	1/10W
R496	1-216-017-91	RES-CHIP	47	5%	1/10W
R497	1-216-097-11	RES-CHIP	100K	5%	1/10W

< SWITCH >

Ref. No.	Part No.	Description
S401	1-771-349-21	SWITCH, KEYBOARD (TOP MENU)

Ref. No.	Part No.	Description			Remark
S402	1-771-349-21	SWITCH, KEYBOARD (⟲ RETURN)			
S403	1-771-349-21	SWITCH, KEYBOARD (MENU)			
S404	1-771-349-21	SWITCH, KEYBOARD (DISPLAY)			
S405	1-771-349-21	SWITCH, KEYBOARD (■)			
S406	1-771-349-21	SWITCH, KEYBOARD (▶▶I)			
S407	1-771-349-21	SWITCH, KEYBOARD (II)			
S408	1-771-349-21	SWITCH, KEYBOARD (I◀◀)			
S409	1-771-349-21	SWITCH, KEYBOARD (⏏)			
S410	1-771-349-21	SWITCH, KEYBOARD (PICTURE MODE)			
S411	1-771-349-21	SWITCH, KEYBOARD (SURROUND)			
S412	1-771-349-21	SWITCH, KEYBOARD (▷)			

< TRANSFORMER >

| T401 | 1-437-620-11 | TRANSFORMER, DC-DC CONVERTER |

< VIBRATOR >

| X401 | 1-781-472-21 | VIBRATOR, CERAMIC (8MHz) |

LE-34 BOARD, COMPLETE
****
(Ref. No.: 1, 000 Series)

< CONNECTOR >

| CN001 | 1-815-412-11 | CONNECTOR, FFC/FPC 5P (NS705V/NS905V) |

< DIODE >

D001	8-719-056-06	DIODE SLR-342DCT32 (PROGRESSIVE)
		(NS755V/NS915V)
D002	8-719-056-06	DIODE SLR-342DCT32 (SUPER AUDIO CD)
D004	6-500-176-01	DIODE EB3804X-TP-J555K
		(MULTI CHANNEL)

< RESISTOR >

Ref. No.	Part No.	Description			
R001	1-216-025-11	RES-CHIP	100	5%	1/10W
			(NS755V/NS915V)		
R002	1-216-025-11	RES-CHIP	100	5%	1/10W
R004	1-216-295-91	SHORT CHIP	0 (NS755V/NS915V)		
R005	1-216-295-91	SHORT CHIP	0		
R007	1-216-033-00	METAL CHIP	220	5%	1/10W

MB-105 ST (E) BOARD, COMPLETE (NS705V)
MB-105 UP (U) BOARD, COMPLETE (NS755V)
MB-105 UNI (E) BOARD, COMPLETE (NS905V: AEP, UK)
MB-105 UNI (RU) BOARD, COMPLETE (NS905V: RUS)
MB-105 UNI (ME) BOARD, COMPLETE (NS905V: EA, ME)
MB-105 UNI (OC) BOARD, COMPLETE (NS905V: AUS, NZ)
MB-105 UP (LA) BOARD, COMPLETE (NS915V: LA)
MB-105 UP (LA) BOARD, COMPLETE (NS915V: EXCEPT LA)
****
(Ref. No.: 2, 000 Series)

< CAPACITOR >

Ref. No.	Part No.	Description			
C102	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C103	1-126-209-11	ELECT CHIP	100uF	20%	4V
C104	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C105	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C106	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C107	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C108	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C109	1-126-209-11	ELECT CHIP	100uF	20%	4V
C111	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

Ref. No.	Part No.	Description			Remark
C113	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C115	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C118	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C120	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C121	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C122	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C124	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C125	1-126-607-11	ELECT CHIP	47uF	20%	4V
C126	1-126-204-11	ELECT CHIP	47uF	20%	16V
C127	1-126-246-11	ELECT CHIP	220uF	20%	4V
C128	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C129	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
					(NS905V/NS915V)
C130	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C201	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C202	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C203	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C204	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C210	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C211	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C212	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C213	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C214	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C215	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C216	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C218	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C219	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C220	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C221	1-124-779-00	ELECT CHIP	10uF	20%	16V
C225	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C226	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C228	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C229	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C230	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C232	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C233	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C234	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C235	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C236	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C238	1-124-779-00	ELECT CHIP	10uF	20%	16V
C240	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C241	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C242	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C243	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C244	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C245	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C246	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C247	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C248	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C249	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C250	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C251	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C252	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C253	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C254	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C255	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C256	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C257	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C258	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C259	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V

Ref. No.	Part No.	Description			Remark
C260	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C261	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C262	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C263	1-124-779-00	ELECT CHIP	10uF	20%	16V
C264	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C265	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C266	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C270	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C271	1-126-204-11	ELECT CHIP	47uF	20%	16V
C272	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C273	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C302	1-124-779-00	ELECT CHIP	10uF	20%	16V
C304	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C305	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C308	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C309	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C310	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C311	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C312	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C313	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C314	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C315	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C316	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C317	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C318	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C319	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C320	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C321	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C322	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C323	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C324	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C325	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C326	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C327	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C328	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C329	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C330	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C331	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C332	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C333	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C334	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C335	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C337	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C338	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C339	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C340	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C343	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C344	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C401	1-126-193-11	ELECT	1uF	20%	50V
C402	1-124-779-00	ELECT CHIP	10uF	20%	16V (NS705V)
C403	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (NS705V)
C404	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C405	1-124-779-00	ELECT CHIP	10uF	20%	16V
C406	1-126-209-11	ELECT CHIP	100uF	20%	4V (NS705V)
C407	1-124-779-00	ELECT CHIP	10uF	20%	16V
C408	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C410	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C411	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C413	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C414	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C416	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C417	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C418	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C419	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C420	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C421	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C423	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C424	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C426	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C427	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C429	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C430	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C431	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C432	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C433	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C436	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C437	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C445	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C446	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C449	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C501	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C502	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C503	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C504	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C505	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C508	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C509	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C510	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C511	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C512	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C513	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C514	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C515	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C516	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C517	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C518	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C519	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C520	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C521	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C522	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C523	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C524	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C525	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C526	1-127-956-21	FILM CHIP	0.1uF	5%	16V (NS905V/NS915V)
C527	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C529	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V
C530	1-127-956-21	FILM CHIP	0.1uF	5%	16V
C531	1-127-956-21	FILM CHIP	0.1uF	5%	16V (NS905V/NS915V)
C532	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C533	1-127-956-21	FILM CHIP	0.1uF	5%	16V
C534	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C535	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C537	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C538	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C601	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V (NS755V/NS915V)

Ref. No.	Part No.	Description			Remark
C602	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
					(NS755V/NS915V)
C603	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
					(NS755V/NS915V)
C604	1-126-607-11	ELECT CHIP	47uF	20%	4V
					(NS755V/NS915V)
C605	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
					(NS755V/NS915V)
C606	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
					(NS755V/NS915V)
C607	1-126-607-11	ELECT CHIP	47uF	20%	4V
					(NS755V/NS915V)
C608	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
					(NS755V/NS915V)
C609	1-126-607-11	ELECT CHIP	47uF	20%	4V
					(NS755V/NS915V)
C610	1-126-607-11	ELECT CHIP	47uF	20%	4V
					(NS755V/NS915V)
C611	1-126-607-11	ELECT CHIP	47uF	20%	4V
					(NS755V/NS915V)
C612	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
					(NS755V/NS915V)
C613	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
					(NS755V/NS915V)
C614	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
					(NS755V/NS915V)
C615	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
					(NS755V/NS915V)
C616	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
					(NS755V/NS915V)
C617	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
					(NS755V/NS915V)
C618	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
					(NS755V/NS915V)
C619	1-126-607-11	ELECT CHIP	47uF	20%	4V
					(NS755V/NS915V)
C620	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
					(NS755V/NS915V)
C621	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
					(NS755V/NS915V)
C622	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
					(NS755V/NS915V)
C623	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
					(NS755V/NS915V)
C624	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
					(EXCEPT NS705V)
C625	1-127-715-91	CERAMIC CHIP	0.22uF	10%	16V
					(EXCEPT NS705V)
C626	1-126-607-11	ELECT CHIP	47uF	20%	4V
					(EXCEPT NS705V)
C627	1-127-715-91	CERAMIC CHIP	0.22uF	10%	16V
					(EXCEPT NS705V)
C628	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
					(EXCEPT NS705V)
C629	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
					(EXCEPT NS705V)
C630	1-164-173-11	CERAMIC CHIP	0.0039uF	10%	50V
					(EXCEPT NS705V)
C631	1-127-956-21	FILM CHIP	0.1uF	5%	16V
					(EXCEPT NS705V)
C632	1-127-956-21	FILM CHIP	0.1uF	5%	16V
					(EXCEPT NS705V)
C633	1-164-733-11	CERAMIC CHIP	820PF	10%	50V
					(EXCEPT NS705V)

Ref. No.	Part No.	Description			Remark
C634	1-127-715-91	CERAMIC CHIP	0.22uF	10%	16V
					(EXCEPT NS705V)
C635	1-126-209-11	ELECT CHIP	100uF	20%	4V
					(EXCEPT NS705V)
C636	1-127-715-91	CERAMIC CHIP	0.22uF	10%	16V
					(EXCEPT NS705V)
C637	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
					(EXCEPT NS705V)
C638	1-127-715-91	CERAMIC CHIP	0.22uF	10%	16V
					(EXCEPT NS705V)
C639	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
					(EXCEPT NS705V)
C901	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C902	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C903	1-124-779-00	ELECT CHIP	10uF	20%	16V
C904	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C905	1-127-715-91	CERAMIC CHIP	0.22uF	10%	16V
C907	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C909	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C910	1-126-209-11	ELECT CHIP	100uF	20%	4V
C912	1-127-715-91	CERAMIC CHIP	0.22uF	10%	16V
C913	1-126-209-11	ELECT CHIP	100uF	20%	4V
C914	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C915	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C916	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C917	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C919	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C920	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C921	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C922	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C923	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C924	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C925	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C926	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C927	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C928	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C929	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C930	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C931	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C932	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C933	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C934	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C935	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C936	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

< CONNECTOR >

CN101	1-815-459-21	CONNECTOR, BOARD TO BOARD 15P	
* CN104	1-770-470-21	PIN, CONNECTOR (PC BOARD) 6P	
CN203	1-815-507-21	CONNECTOR, FFC/FPC 26P	

< DIODE >

D501	8-719-914-44	DIODE	DAP202K-T-146
D502	8-719-914-44	DIODE	DAP202K-T-146
D503	8-719-914-44	DIODE	DAP202K-T-146

< FERRITE BEAD >

FB101	1-469-784-11	FERRITE	0uH
FB103	1-469-784-11	FERRITE	0uH
FB104	1-469-324-21	FERRITE	0uH
FB105	1-469-324-21	FERRITE	0uH
FB106	1-469-324-21	FERRITE	0uH

Ref. No.	Part No.	Description		Remark
FB107	1-469-324-21	FERRITE	0uH	
FB108	1-469-324-21	FERRITE	0uH	
FB109	1-469-324-21	FERRITE	0uH	
FB110	1-469-324-21	FERRITE	0uH	
FB111	1-469-324-21	FERRITE	0uH	
FB112	1-469-784-11	FERRITE	0uH	
FB501	1-469-784-11	FERRITE	0uH	
FB502	1-469-784-11	FERRITE	0uH	
		< FILTER >		
FL101	1-234-494-21	FILTER, EMI REMOVAL (SMD)		
			(NS705V/NS755V)	
FL102	1-234-494-21	FILTER, EMI REMOVAL (SMD)		
FL103	1-234-494-21	FILTER, EMI REMOVAL (SMD)		
FL104	1-234-494-21	FILTER, EMI REMOVAL (SMD)		
FL105	1-234-494-21	FILTER, EMI REMOVAL (SMD)		
FL106	1-234-494-21	FILTER, EMI REMOVAL (SMD)		
FL107	1-233-893-21	FILTER, CHIP EMI		
FL108	1-234-494-21	FILTER, EMI REMOVAL (SMD)		
FL109	1-234-494-21	FILTER, EMI REMOVAL (SMD)		
FL201	1-234-494-21	FILTER, EMI REMOVAL (SMD)		
FL402	1-234-494-21	FILTER, EMI REMOVAL (SMD)		
FL403	1-234-494-21	FILTER, EMI REMOVAL (SMD)		
FL404	1-234-494-21	FILTER, EMI REMOVAL (SMD)		
FL501	1-234-494-21	FILTER, EMI REMOVAL (SMD)		
FL502	1-234-494-21	FILTER, EMI REMOVAL (SMD)		
FL901	1-234-494-21	FILTER, EMI REMOVAL (SMD)		
FL902	1-234-494-21	FILTER, EMI REMOVAL (SMD)		
FL903	1-234-494-21	FILTER, EMI REMOVAL (SMD)		
FL905	1-234-494-21	FILTER, EMI REMOVAL (SMD)		
		< IC >		
IC101	8-759-643-29	IC BR24C64F-E2		
IC102	6-702-302-01	IC TK11133CSCL-G (NS905V/NS915V)		
IC103	6-701-879-01	IC CY24233ZCT		
IC104	6-701-837-01	IC MB91307RPFV-G-BND-E1		
IC107	6-802-273-01	IC MR27V3202F-CNTPZ04B (NS705V)		
IC107	6-802-272-01	IC MR27V3202F-7UTPZ04B		
			(EXCEPT NS705V)	
IC108	6-701-874-01	IC IDT71V016SA15PH8 (SCD2994)		
IC201	6-701-700-01	IC SP3728ACB		
IC202	8-759-826-42	IC FAN8034		
IC301	6-701-876-01	IC CXD9703R		
IC302	6-702-302-01	IC TK11133CSCL-G		
IC303	8-759-643-10	IC GM71V18160CT-6TR		
IC401	6-702-300-01	IC TK11118CSCL-G		
IC402	6-702-302-01	IC TK11133CSCL-G (NS705V)		
IC403	8-752-416-45	IC CXD1935Q		
IC406	6-700-098-01	IC HY57V641620HGT-P-TR-V		
IC501	8-752-418-21	IC CXD1938AR		
IC502	6-700-534-01	IC CXD9675R-L		
IC503	8-759-082-59	IC TC7W32FU (TE12R)		
IC504	6-700-533-01	IC CXD9674TN-E2		
IC601	6-702-301-01	IC TK11125CSCL-G (NS755V/NS915V)		
IC602	6-701-814-01	IC CXD9698R (NS755V/NS915V)		
IC603	8-759-663-74	IC HY57V161610DTC-7T (NS755V/NS915V)		
IC604	6-701-079-01	IC ADV7300AKST (EXCEPT NS705V)		
IC605	6-702-301-01	IC TK11125CSCL-G (EXCEPT NS705V)		
IC901	6-702-299-01	IC TK11225CMCL		
IC903	6-700-353-01	IC MT48LC1M16A1TG-6STR		
IC905	8-752-416-77	IC CXD2753R		

Ref. No.	Part No.	Description		Remark		
IC906	6-702-231-01	IC LMH6642MFX				
		< COIL >				
L001	1-414-410-21	INDUCTOR	10uH			
L201	1-412-031-11	INDUCTOR CHIP	47uH			
L202	1-412-031-11	INDUCTOR CHIP	47uH			
		< TRANSISTOR >				
Q201	8-729-903-46	TRANSISTOR	2SB1132-T100-QR			
Q202	8-729-903-46	TRANSISTOR	2SB1132-T100-QR			
Q401	8-729-216-22	TRANSISTOR	2SA1162-YG-TE85L			
				(NS705V)		
Q601	8-729-216-22	TRANSISTOR	2SA1162-YG-TE85L			
				(NS905V)		
		< RESISTOR >				
R001	1-216-864-11	SHORT CHIP	0 (NS905V)			
R002	1-216-864-11	SHORT CHIP	0 (NS905V)			
R003	1-216-864-11	SHORT CHIP	0 (NS905V)			
R004	1-216-864-11	SHORT CHIP	0 (NS905V)			
R005	1-216-864-11	SHORT CHIP	0 (NS905V)			
R006	1-216-864-11	SHORT CHIP	0 (NS905V)			
R007	1-216-864-11	SHORT CHIP	0 (NS905V)			
R008	1-216-864-11	SHORT CHIP	0 (NS905V)			
R009	1-216-864-11	SHORT CHIP	0 (NS905V)			
R010	1-216-864-11	SHORT CHIP	0 (NS905V)			
R011	1-216-864-11	SHORT CHIP	0 (NS905V)			
R012	1-216-864-11	SHORT CHIP	0 (NS905V)			
R013	1-216-864-11	SHORT CHIP	0 (NS905V)			
R014	1-216-864-11	SHORT CHIP	0 (NS905V)			
R015	1-216-864-11	SHORT CHIP	0 (NS905V)			
R016	1-216-864-11	SHORT CHIP	0 (NS905V)			
R017	1-216-864-11	SHORT CHIP	0 (NS905V)			
R018	1-216-864-11	SHORT CHIP	0 (NS905V)			
R019	1-216-864-11	SHORT CHIP	0 (NS905V)			
R020	1-216-864-11	SHORT CHIP	0 (NS905V)			
R021	1-216-833-11	METAL CHIP	10K	5%	1/10W	
				(EXCEPT NS705V)		
R026	1-216-821-11	METAL CHIP	1K	5%	1/10W	
				(NS905V)		
R028	1-216-864-11	SHORT CHIP	0 (NS905V)			
R029	1-216-864-11	SHORT CHIP	0 (NS705V)			
R102	1-216-809-11	METAL CHIP	100	5%	1/10W	
R104	1-216-789-11	METAL CHIP	2.2	5%	1/10W	
				(NS705V/NS755V)		
R106	1-216-797-11	METAL CHIP	10	5%	1/10W	
R107	1-216-845-11	METAL CHIP	100K	5%	1/10W	
R108	1-216-864-11	SHORT CHIP	0			
R109	1-216-797-11	METAL CHIP	10	5%	1/10W	
R110	1-216-821-11	METAL CHIP	1K	5%	1/10W	
R111	1-216-821-11	METAL CHIP	1K	5%	1/10W	
R112	1-216-845-11	METAL CHIP	100K	5%	1/10W	
R113	1-216-837-11	METAL CHIP	22K	5%	1/10W	
R114	1-216-823-11	METAL CHIP	1.5K	5%	1/10W	
R115	1-216-821-11	METAL CHIP	1K	5%	1/10W	
R117	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R118	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R119	1-216-801-11	METAL CHIP	22	5%	1/10W	
R120	1-216-801-11	METAL CHIP	22	5%	1/10W	
R121	1-216-797-11	METAL CHIP	10	5%	1/10W	
R122	1-216-801-11	METAL CHIP	22	5%	1/10W	

Ref. No.	Part No.	Description			Remark
R123	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R124	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R125	1-216-833-11	METAL CHIP	10K	5%	1/10W
R126	1-216-833-11	METAL CHIP	10K	5%	1/10W
R129	1-216-821-11	METAL CHIP	1K	5%	1/10W
R133	1-216-833-11	METAL CHIP	10K	5%	1/10W
R138	1-216-809-11	METAL CHIP	100	5%	1/10W
R139	1-216-833-11	METAL CHIP	10K	5%	1/10W
R140	1-216-833-11	METAL CHIP	10K	5%	1/10W
R144	1-216-797-11	METAL CHIP	10	5%	1/10W
R146	1-216-797-11	METAL CHIP	10	5%	1/10W
R148	1-216-809-11	METAL CHIP	100	5%	1/10W
R150	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R152	1-216-833-11	METAL CHIP	10K	5%	1/10W
R153	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R154	1-216-809-11	METAL CHIP	100	5%	1/10W
R155	1-216-809-11	METAL CHIP	100	5%	1/10W
R156	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R159	1-216-833-11	METAL CHIP	10K	5%	1/10W
R160	1-216-809-11	METAL CHIP	100	5%	1/10W
R164	1-216-075-00	METAL CHIP	12K	5%	(NS705V/NS905V: AEP, UK)
R164	1-216-065-91	RES-CHIP	4.7K	5%	1/10W (NS905V: RUS)
R164	1-216-047-91	RES-CHIP	820	5%	1/10W (NS905V: EA, ME)
R164	1-216-041-00	METAL CHIP	470	5%	1/10W (NS905V: AUS, NZ)
R164	1-216-081-00	METAL CHIP	22K	5%	1/10W (NS915V: LA)
R164	1-216-057-00	METAL CHIP	2.2K	5%	1/10W (NS915V: EXCEPT LA)
R165	1-216-833-11	METAL CHIP	10K	5%	1/10W
R166	1-216-061-91	RES-CHIP	3.3K	5%	1/10W (NS705V)
R166	1-216-654-11	METAL CHIP	1.3K	0.5%	1/10W (NS755V/NS915V)
R166	1-216-047-91	RES-CHIP	820	5%	1/10W (NS905V)
R167	1-216-809-11	METAL CHIP	100	5%	1/10W
R169	1-216-089-91	RES-CHIP	47K	5%	1/10W (NS705V/NS905V: AEP, UK, EA, ME)
R169	1-216-069-00	METAL CHIP	6.8K	5%	1/10W (NS905V: RUS)
R169	1-216-075-00	METAL CHIP	12K	5%	1/10W (NS905V: AUS, NZ/NS915V: LA)
R169	1-216-081-00	METAL CHIP	22K	5%	1/10W (NS915V: EXCEPT LA)
R171	1-216-833-11	METAL CHIP	10K	5%	1/10W
R172	1-216-821-11	METAL CHIP	1K	5%	1/10W
R173	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (NS755V/NS915V)
R174	1-216-827-11	METAL CHIP	3.3K	5%	1/10W (NS705V/NS905V)
R176	1-216-809-11	METAL CHIP	100	5%	1/10W
R177	1-216-809-11	METAL CHIP	100	5%	1/10W
R178	1-216-809-11	METAL CHIP	100	5%	1/10W
R179	1-216-809-11	METAL CHIP	100	5%	1/10W
R183	1-216-809-11	METAL CHIP	100	5%	1/10W
R187	1-216-809-11	METAL CHIP	100	5%	1/10W
R188	1-216-809-11	METAL CHIP	100	5%	1/10W
R189	1-216-809-11	METAL CHIP	100	5%	1/10W
R191	1-216-864-11	SHORT CHIP	0		
R193	1-216-809-11	METAL CHIP	100	5%	1/10W
R195	1-216-809-11	METAL CHIP	100	5%	1/10W
R196	1-216-809-11	METAL CHIP	100	5%	1/10W
R197	1-216-809-11	METAL CHIP	100	5%	1/10W
R198	1-216-809-11	METAL CHIP	100	5%	1/10W
R206	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R207	1-216-809-11	METAL CHIP	100	5%	1/10W
R210	1-216-815-11	METAL CHIP	330	5%	1/10W
R211	1-216-809-11	METAL CHIP	100	5%	1/10W
R212	1-216-809-11	METAL CHIP	100	5%	1/10W
R213	1-216-833-11	METAL CHIP	10K	5%	1/10W
R214	1-216-833-11	METAL CHIP	10K	5%	1/10W
R216	1-216-821-11	METAL CHIP	1K	5%	1/10W
R217	1-216-821-11	METAL CHIP	1K	5%	1/10W
R218	1-216-846-11	METAL CHIP	120K	5%	1/10W
R219	1-216-846-11	METAL CHIP	120K	5%	1/10W
R220	1-216-847-11	METAL CHIP	150K	5%	1/10W
R221	1-216-847-11	METAL CHIP	150K	5%	1/10W
R222	1-216-842-11	METAL CHIP	56K	5%	1/10W
R223	1-216-842-11	METAL CHIP	56K	5%	1/10W
R224	1-216-850-11	METAL CHIP	270K	5%	1/10W
R225	1-216-833-11	METAL CHIP	10K	5%	1/10W
R226	1-216-853-11	METAL CHIP	470K	5%	1/10W
R227	1-216-846-11	METAL CHIP	120K	5%	1/10W
R229	1-216-833-11	METAL CHIP	10K	5%	1/10W
R230	1-216-839-11	METAL CHIP	33K	5%	1/10W
R231	1-216-855-11	METAL CHIP	680K	5%	1/10W
R232	1-216-839-11	METAL CHIP	33K	5%	1/10W
R233	1-216-853-11	METAL CHIP	470K	5%	1/10W
R234	1-216-803-11	METAL CHIP	33	5%	1/10W
R235	1-216-809-11	METAL CHIP	100	5%	1/10W
R236	1-216-803-11	METAL CHIP	33	5%	1/10W
R238	1-216-839-11	METAL CHIP	33K	5%	1/10W
R239	1-216-839-11	METAL CHIP	33K	5%	1/10W
R240	1-216-839-11	METAL CHIP	33K	5%	1/10W
R241	1-216-839-11	METAL CHIP	33K	5%	1/10W
R242	1-216-849-11	METAL CHIP	220K	5%	1/10W
R243	1-216-853-11	METAL CHIP	470K	5%	1/10W
R244	1-216-821-11	METAL CHIP	1K	5%	1/10W
R245	1-216-841-11	METAL CHIP	47K	5%	1/10W
R246	1-216-809-11	METAL CHIP	100	5%	1/10W
R248	1-216-803-11	METAL CHIP	33	5%	1/10W
R249	1-216-803-11	METAL CHIP	33	5%	1/10W
R250	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R251	1-216-841-11	METAL CHIP	47K	5%	1/10W
R252	1-216-839-11	METAL CHIP	33K	5%	1/10W
R253	1-218-889-11	METAL CHIP	56K	0.5%	1/10W
R254	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R255	1-218-889-11	METAL CHIP	56K	0.5%	1/10W
R256	1-216-809-11	METAL CHIP	100	5%	1/10W
R259	1-216-833-11	METAL CHIP	10K	5%	1/10W
R260	1-216-834-11	METAL CHIP	12K	5%	1/10W
R261	1-216-833-11	METAL CHIP	10K	5%	1/10W
R262	1-216-815-11	METAL CHIP	330	5%	1/10W
R263	1-216-861-11	METAL CHIP	2.2M	5%	1/10W
R264	1-216-845-11	METAL CHIP	100K	5%	1/10W
R265	1-216-838-11	METAL CHIP	27K	5%	1/10W
R269	1-216-833-11	METAL CHIP	10K	5%	1/10W
R273	1-216-864-11	SHORT CHIP	0		
R301	1-216-295-91	SHORT CHIP	0		

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Ref. No.	Part No.	Description			Remark
R302	1-216-295-91	SHORT CHIP	0		
R310	1-216-821-11	METAL CHIP	1K	5%	1/10W
R311	1-216-809-11	METAL CHIP	100	5%	1/10W
R312	1-218-831-11	METAL CHIP	220	0.5%	1/10W
R313	1-216-817-11	METAL CHIP	470	5%	1/10W
R314	1-216-817-11	METAL CHIP	470	5%	1/10W
R315	1-216-817-11	METAL CHIP	470	5%	1/10W
R316	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R317	1-216-833-11	METAL CHIP	10K	5%	1/10W
R318	1-216-817-11	METAL CHIP	470	5%	1/10W
R319	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R320	1-218-883-11	METAL CHIP	33K	0.5%	1/10W
R321	1-218-879-11	METAL CHIP	22K	0.5%	1/10W
R322	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R323	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W
R324	1-216-833-11	METAL CHIP	10K	5%	1/10W
R325	1-218-867-11	RES-CHIP	6.8K	5%	1/10W
R326	1-216-833-11	METAL CHIP	10K	5%	1/10W
R327	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R328	1-216-838-11	METAL CHIP	27K	5%	1/10W
R329	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R330	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R331	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R332	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R333	1-216-847-11	METAL CHIP	150K	5%	1/10W
R334	1-218-853-11	METAL CHIP	1.8K	0.5%	1/10W
R335	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R336	1-216-833-11	METAL CHIP	10K	5%	1/10W
R337	1-216-833-11	METAL CHIP	10K	5%	1/10W
R338	1-216-801-11	METAL CHIP	22	5%	1/10W
R349	1-216-833-11	METAL CHIP	10K	5%	1/10W
R351	1-216-295-91	SHORT CHIP	0		
R352	1-216-295-91	SHORT CHIP	0		
R358	1-216-833-11	METAL CHIP	10K	5%	1/10W
R359	1-216-833-11	METAL CHIP	10K	5%	1/10W
R360	1-216-809-11	METAL CHIP	100	5%	1/10W
R401	1-216-295-91	SHORT CHIP	0 (NS705V)		
R402	1-216-295-91	SHORT CHIP	0		
R404	1-216-864-11	SHORT CHIP	0 (EXCEPT NS705V)		
R407	1-216-809-11	METAL CHIP	100	5%	1/10W
R408	1-218-831-11	METAL CHIP	220	0.5%	1/10W (NS705V)
R409	1-218-831-11	METAL CHIP	220	0.5%	1/10W (NS705V)
R410	1-218-831-11	METAL CHIP	220	0.5%	1/10W (NS705V)
R411	1-218-831-11	METAL CHIP	220	0.5%	1/10W (NS705V)
R412	1-218-831-11	METAL CHIP	220	0.5%	1/10W (NS705V)
R413	1-218-831-11	METAL CHIP	220	0.5%	1/10W (NS705V)
R414	1-216-833-11	METAL CHIP	10K	5%	1/10W
R416	1-218-867-11	RES-CHIP	6.8K	5%	1/10W
R417	1-216-864-11	SHORT CHIP	0 (EXCEPT NS705V)		
R418	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R419	1-216-797-11	METAL CHIP	10	5%	1/10W
R426	1-216-833-11	METAL CHIP	10K	5%	1/10W
R430	1-216-833-11	METAL CHIP	10K	5%	1/10W
R431	1-216-817-11	METAL CHIP	470	5%	1/10W (NS705V)

Ref. No.	Part No.	Description			Remark
R434	1-216-797-11	METAL CHIP	10	5%	1/10W
R436	1-216-821-11	METAL CHIP	1K	5%	1/10W (NS705V)
R501	1-216-864-11	SHORT CHIP	0		
R507	1-216-864-11	SHORT CHIP	0		
R520	1-216-809-11	METAL CHIP	100	5%	1/10W
R524	1-216-864-11	SHORT CHIP	0		
R525	1-216-833-11	METAL CHIP	10K	5%	1/10W
R527	1-216-833-11	METAL CHIP	10K	5%	1/10W
R530	1-216-833-11	METAL CHIP	10K	5%	1/10W
R531	1-216-833-11	METAL CHIP	10K	5%	1/10W
R532	1-216-833-11	METAL CHIP	10K	5%	1/10W
R540	1-216-809-11	METAL CHIP	100	5%	1/10W
R541	1-216-797-11	METAL CHIP	10	5%	1/10W
R542	1-216-809-11	METAL CHIP	100	5%	1/10W
R547	1-216-833-11	METAL CHIP	10K	5%	1/10W
R554	1-216-864-11	SHORT CHIP	0		
			(EXCEPT NS705V/NS905V: AEP, UK, RUS)		
R555	1-216-864-11	SHORT CHIP	0		
R556	1-216-864-11	SHORT CHIP	0		
			(NS705V/NS905V: AEP, UK, RUS)		
R557	1-216-864-11	SHORT CHIP	0		
R601	1-216-864-11	SHORT CHIP	0 (EXCEPT NS705V)		
R602	1-216-864-11	SHORT CHIP	0 (EXCEPT NS705V)		
R603	1-216-809-11	METAL CHIP	100	5%	1/10W (NS755V/NS915V)
R604	1-216-864-11	SHORT CHIP	0 (NS905V)		
R605	1-216-864-11	SHORT CHIP	0 (NS905V)		
R606	1-216-864-11	SHORT CHIP	0 (NS905V)		
R607	1-216-864-11	SHORT CHIP	0 (NS905V)		
R608	1-216-864-11	SHORT CHIP	0 (NS905V)		
R609	1-216-864-11	SHORT CHIP	0 (NS905V)		
R610	1-216-864-11	SHORT CHIP	0 (NS905V)		
R611	1-216-864-11	SHORT CHIP	0 (NS905V)		
R612	1-216-809-11	METAL CHIP	100	5%	1/10W (NS755V/NS915V)
R613	1-216-809-11	METAL CHIP	100	5%	1/10W (NS755V/NS915V)
R614	1-216-864-11	SHORT CHIP	0 (NS755V/NS915V)		
R615	1-218-285-11	RES-CHIP	75	5%	1/10W (NS755V/NS915V)
R616	1-216-864-11	SHORT CHIP	0 (NS905V)		
R617	1-218-292-11	RES-CHIP	20K	5%	1/10W (NS755V/NS915V)
R618	1-216-864-11	SHORT CHIP	0 (NS755V/NS915V)		
R619	1-216-801-11	METAL CHIP	22	5%	1/10W (NS755V/NS915V)
R620	1-216-801-11	METAL CHIP	22	5%	1/10W (NS755V/NS915V)
R621	1-216-801-11	METAL CHIP	22	5%	1/10W (NS755V/NS915V)
R622	1-216-801-11	METAL CHIP	22	5%	1/10W (NS755V/NS915V)
R623	1-216-801-11	METAL CHIP	22	5%	1/10W (NS755V/NS915V)
R624	1-216-801-11	METAL CHIP	22	5%	1/10W (NS755V/NS915V)
R625	1-216-801-11	METAL CHIP	22	5%	1/10W (NS755V/NS915V)
R626	1-216-801-11	METAL CHIP	22	5%	1/10W (NS755V/NS915V)
R627	1-216-801-11	METAL CHIP	22	5%	1/10W (NS755V/NS915V)

Ref. No.	Part No.	Description			Remark
R628	1-216-801-11	METAL CHIP	22	5%	1/10W
					(NS755V/NS915V)
R629	1-216-801-11	METAL CHIP	22	5%	1/10W
					(NS755V/NS915V)
R630	1-216-801-11	METAL CHIP	22	5%	1/10W
					(NS755V/NS915V)
R631	1-216-801-11	METAL CHIP	22	5%	1/10W
					(NS755V/NS915V)
R632	1-216-801-11	METAL CHIP	22	5%	1/10W
					(NS755V/NS915V)
R633	1-216-801-11	METAL CHIP	22	5%	1/10W
					(NS755V/NS915V)
R634	1-216-801-11	METAL CHIP	22	5%	1/10W
					(NS755V/NS915V)
R640	1-216-789-11	METAL CHIP	2.2	5%	1/10W
					(NS755V/NS915V)
R659	1-216-809-11	METAL CHIP	100	5%	1/10W
					(EXCEPT NS705V)
R661	1-216-809-11	METAL CHIP	100	5%	1/10W
					(EXCEPT NS705V)
R663	1-216-864-11	SHORT CHIP	0 (EXCEPT NS705V)		
R664	1-216-864-11	SHORT CHIP	0 (EXCEPT NS705V)		
R665	1-216-864-11	SHORT CHIP	0 (EXCEPT NS705V)		
R674	1-216-819-11	METAL CHIP	680	5%	1/10W
					(EXCEPT NS705V)
R675	1-216-821-11	METAL CHIP	1K	5%	1/10W
					(EXCEPT NS705V)
R676	1-216-821-11	METAL CHIP	1K	5%	1/10W
					(EXCEPT NS705V)
R677	1-216-809-11	METAL CHIP	100	5%	1/10W
					(EXCEPT NS705V)
R678	1-218-834-11	METAL CHIP	300	0.5%	1/10W
					(EXCEPT NS705V)
R679	1-218-834-11	METAL CHIP	300	0.5%	1/10W
					(EXCEPT NS705V)
R680	1-218-834-11	METAL CHIP	300	0.5%	1/10W
					(EXCEPT NS705V)
R681	1-218-834-11	METAL CHIP	300	0.5%	1/10W
					(EXCEPT NS705V)
R682	1-218-834-11	METAL CHIP	300	0.5%	1/10W
					(EXCEPT NS705V)
R683	1-218-834-11	METAL CHIP	300	0.5%	1/10W
					(EXCEPT NS705V)
R686	1-469-784-11	FERRITE	0uH (NS705V)		
R687	1-216-864-11	SHORT CHIP	0 (EXCEPT NS705V)		
R688	1-469-784-11	FERRITE	0uH (NS705V)		
R689	1-216-864-11	SHORT CHIP	0 (EXCEPT NS705V)		
R690	1-216-864-11	SHORT CHIP	0 (NS705V)		
R691	1-216-864-11	SHORT CHIP	0 (EXCEPT NS705V)		
R692	1-216-864-11	SHORT CHIP	0 (NS705V)		
R693	1-216-864-11	SHORT CHIP	0 (EXCEPT NS705V)		
R694	1-216-864-11	SHORT CHIP	0 (NS705V)		
R695	1-216-864-11	SHORT CHIP	0 (EXCEPT NS705V)		
R696	1-216-864-11	SHORT CHIP	0 (NS705V)		
R697	1-216-864-11	SHORT CHIP	0 (EXCEPT NS705V)		
R700	1-216-864-11	SHORT CHIP	0 (NS705V/NS905V)		
R903	1-216-833-11	METAL CHIP	10K	5%	1/10W
R904	1-216-833-11	METAL CHIP	10K	5%	1/10W
R905	1-216-833-11	METAL CHIP	10K	5%	1/10W
R907	1-216-833-11	METAL CHIP	10K	5%	1/10W
R908	1-216-833-11	METAL CHIP	10K	5%	1/10W
R909	1-216-834-11	METAL CHIP	12K	5%	1/10W
R910	1-218-867-11	RES-CHIP	6.8K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R911	1-216-833-11	METAL CHIP	10K	5%	1/10W
R912	1-216-833-11	METAL CHIP	10K	5%	1/10W
R913	1-216-803-11	METAL CHIP	33	5%	1/10W
R914	1-216-833-11	METAL CHIP	10K	5%	1/10W
R915	1-216-821-11	METAL CHIP	1K	5%	1/10W
R916	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R917	1-216-864-11	SHORT CHIP	0		
R921	1-216-833-11	METAL CHIP	10K	5%	1/10W
R922	1-216-833-11	METAL CHIP	10K	5%	1/10W
R923	1-216-809-11	METAL CHIP	100	5%	1/10W
R925	1-216-809-11	METAL CHIP	100	5%	1/10W
R955	1-216-809-11	METAL CHIP	100	5%	1/10W
R956	1-216-809-11	METAL CHIP	100	5%	1/10W
R957	1-216-809-11	METAL CHIP	100	5%	1/10W
R958	1-216-809-11	METAL CHIP	100	5%	1/10W
R959	1-216-809-11	METAL CHIP	100	5%	1/10W
R960	1-216-809-11	METAL CHIP	100	5%	1/10W
R961	1-216-809-11	METAL CHIP	100	5%	1/10W
R962	1-216-809-11	METAL CHIP	100	5%	1/10W

< COMPOSITION CIRCUIT BLOCK >

Ref. No.	Part No.	Description
* RB102	1-233-270-11	NETWORK, RES (8 GANG) 10K
RB103	1-233-576-11	RES, CHIP NETWORK 100
RB104	1-233-576-11	RES, CHIP NETWORK 100
RB105	1-233-576-11	RES, CHIP NETWORK 100
RB106	1-233-576-11	RES, CHIP NETWORK 100
RB107	1-233-576-11	RES, CHIP NETWORK 100
RB108	1-233-576-11	RES, CHIP NETWORK 100
RB109	1-233-576-11	RES, CHIP NETWORK 100
RB110	1-233-576-11	RES, CHIP NETWORK 100
RB111	1-233-576-11	RES, CHIP NETWORK 100

< VARIABLE RESISTOR >

Ref. No.	Part No.	Description
RV401	1-223-583-11	RES, ADJ, CARBON 1K (NS705V)
RV601	1-223-583-11	RES, ADJ, CARBON 1K (EXCEPT NS705V)
RV602	1-223-583-11	RES, ADJ, CARBON 1K (EXCEPT NS705V)

< VIBRATOR >

Ref. No.	Part No.	Description
X101	1-795-174-11	VIBRATOR, CERAMIC (16.5MHz)
X102	1-795-540-21	VIBRATOR, CRYSTAL (27MHz)

MS-81 BOARD
****
(Ref. No.: 1, 000 Series)

< CONNECTOR >

Ref. No.	Part No.	Description
CN001	1-815-412-11	CONNECTOR, FFC/FPC 5P

< SWITCH >

Ref. No.	Part No.	Description
S001	1-786-133-11	SWITCH, ROTARY (CHUCK/TRAY DETECT)

Ref. No.	Part No.	Description	Remark
⚠	1-468-651-11	POWER SUPPLY BLOCK (ETXNY393N2F) (NS705V/NS905V/NS915V: EXCEPT HK, SP, MY, TH, PH, IA, VTM, KR)	
		*********************	
		(Ref. No.: 5, 000 Series)	
		< FUSE >	
⚠ F101	9-885-020-87	FUSE (2A/250V)	
⚠	1-468-650-12	POWER BLOCK (HS12S1U) (NS755V/NS915V: TW)	
		*********************	
		(Ref. No.: 5, 000 Series)	
		< FUSE >	
⚠ F101	1-533-296-11	FUSE (2A/125V)	
⚠	1-468-652-11	POWER BLOCK (HS12S1F) (NS915V: LA)	
		*********************	
		(Ref. No.: 5, 000 Series)	
		< FUSE >	
⚠ F101	1-532-388-31	FUSE (2A/250V)	
		MISCELLANEOUS	
		**************	
1	3-075-008-01	RING, SHUTTLE (NS755V)	
7	1-477-212-11	REMOTE COMMANDER (RMT-D146P) (NS705V)	
7	1-477-213-11	REMOTE COMMANDER (RMT-D147A) (NS755V)	
11	1-757-697-11	CABLE, FLEXIBLE FLAT (FMM-035)	
12	1-757-694-11	CABLE, FLEXIBLE FLAT (FMO-002)	
13	1-757-693-11	CABLE, FLEXIBLE FLAT (FMO-001)	
14	1-476-714-11	ENCODER, ROTARY (NS755V)	
16	1-786-131-11	SWITCH, TACTILE (NS705V)	
57	1-477-213-11	REMOTE COMMANDER (RMT-D147A) (NS915V: LA)	
57	1-477-213-31	REMOTE COMMANDER (RMT-D147E) (NS915V: EXCEPT LA)	
57	1-477-213-41	REMOTE COMMANDER (RMT-D147P) (NS905V: AEP, UK, RUS)	
57	1-477-213-51	REMOTE COMMANDER (RMT-D147O) (NS905V: EA, ME, AUS, NZ)	
61	1-757-697-11	CABLE, FLEXIBLE FLAT (FMM-035)	
62	1-757-694-11	CABLE, FLEXIBLE FLAT (FMO-002)	
63	1-757-693-11	CABLE, FLEXIBLE FLAT (FMO-001)	
65	1-476-714-11	ENCODER, ROTARY	
⚠ 101	1-468-650-11	POWER BLOCK (HS12S1U) (NS755V)	
⚠ 101	1-468-651-11	POWER SUPPLY BLOCK (ETXNY393N2F) (NS705V)	
⚠ 103	1-575-651-21	CORD, POWER (NS705V)	
⚠ 103	1-783-531-11	CORD, POWER (NS755V)	
⚠ 103	1-757-140-11	CORD, POWER (NS705V: AEP)	
⚠ 103	1-823-597-11	CORD, POWER (NS755V)	
⚠ 151	1-468-650-12	POWER BLOCK (HS12S1U) (NS915V: TW)	

Ref. No.	Part No.	Description	Remark
⚠ 151	1-468-651-11	POWER SUPPLY BLOCK (ETXNY393N2F) (NS905V/NS915V: HK, SP, MY, TH, PH, IA, VTM, KR)	
⚠ 151	1-468-652-11	POWER BLOCK (HS12S1F) (NS915V: LA)	
⚠ 153	1-575-651-21	CORD, POWER (NS905V: AEP, UK, RUS, EA, ME/NS915V: LA, HK, SP, MY, TH, PH, IA, VTM)	
⚠ 153	1-782-752-31	CORD, POWER (NS915V: KR)	
⚠ 153	1-790-588-11	CORD, POWER (NS905V: AUS, NZ)	
⚠ 153	1-824-303-11	POWER-SUPPLY CORD (NS915V: TW)	
⚠ 204	A-6062-709-A	KHM-270AAA SERVICE ASSY	
		ACCESSORIES	
		************	
⚠	1-770-019-12	ADAPTOR, CONVERSION PLUG 3P (NS705V: UK/NS905V: UK/NS915V: HK)	
⚠	1-569-008-21	ADAPTOR, CONVERSION 2P (NS905V: EA/NS915V: LA)	
	1-751-271-11	CORD, CONNECTION	
	1-823-364-21	CORD, CONNECTION	
	3-075-801-11	MANUAL, INSTRUCTION (FRENCH) (NS705V: AEP/NS905V: AEP)	
	3-075-801-21	MANUAL, INSTRUCTION (GERMAN) (NS705V: AEP/NS905V: AEP)	
	3-075-801-31	MANUAL, INSTRUCTION (ITALIAN) (NS705V: AEP/NS905V: AEP)	
	3-075-801-41	MANUAL, INSTRUCTION (DUTCH) (NS705V: AEP/NS905V: AEP)	
	3-075-801-51	MANUAL, INSTRUCTION (SPANISH) (NS705V: AEP/NS905V: AEP)	
	3-075-801-61	MANUAL, INSTRUCTION (PORTUGUESE) (NS705V: AEP/NS905V: AEP)	
	3-075-802-11	MANUAL, INSTRUCTION (ENGLISH) (NS705V: UK/NS905V: UK, RU)	
	3-075-802-21	MANUAL, INSTRUCTION (RUSSIAN) (NS905V: RU)	
	3-075-802-31	MANUAL, INSTRUCTION (ENGLISH) (NS905V: EA, ME, AUS, NZ)	
	3-075-802-41	MANUAL, INSTRUCTION (ARABIC) (NS905V: EA, ME)	
	3-075-803-11	MANUAL, INSTRUCTION (ENGLISH) (NS755V/NS915V: HK, SP, MY, TH, PH, IA, VTM, TW, KR)	
	3-075-803-21	MANUAL, INSTRUCTION (FRENCH) (NS755V)	
	3-075-803-31	MANUAL, INSTRUCTION (SPANISH) (NS915V: LA)	
	3-075-803-41	MANUAL, INSTRUCTION (TRADITIONAL CHINESE) (NS915V: HK, TW)	
	3-075-803-51	MANUAL, INSTRUCTION (SIMPLIFIED CHINESE) (NS915V: SP, MY, TH, PH, IA, VTM)	
	3-075-803-61	MANUAL, INSTRUCTION (KOREAN) (NS915V: KR)	

DVP-NS705V/NS755V/NS905V/NS915V